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The OIL WEEKLY

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WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Crude Market Steady With Only One Weak Spot

Smaller West Texas operators showing disposition to move at any price, while Seminole decline helps in Oklahoma-Kansas

By KENT RIDLEY

THE market situation was little changed during the week. Production apparently is going down again after the slight upward spurt of two weeks ago, the loss being general to the several producing areas. Rumors in financial circles of impending crude price reductions apparently have their foundation in West Texas where some smaller operators are willing to sacrifice their production at levels lower than the posted price, rather than hold it in tanks which must be provided at a cost per barrel almost equaling the price of the oil, and small promise of any salvage from the steel. The refined market is about holding its own with ordinary gasoline slightly lower and less in demand, but kerosene and higher gravities of gasoline in seasonal better demand.

Estimates of production for the period ending October 8 show a decline of approximately 12,000 barrels from the daily average of the week previous. The decrease was general in all sections with the exception of Texas, where an increase of 1000 barrels was recorded, opening of wells in West Texas giving that section an increase of 3000 barrels daily, which was reduced by losses in other parts of the State.

Production Decline

Oklahoma's average for the week was 807,000 barrels, a decrease of 2700 barrels. Seminole declined nearly 1000 barrels, an increase of 6000 barrels in the Little River field being more than offset by a decrease of 4200 barrels at Bowlegs and lesser drops in the Seminole and Earlsboro fields. The Searight field's daily production was 100 barrels higher than during the previous week.

California's yield was 633,000 barrels, a decrease of 3750 barrels; Wyoming was 49,050 barrels, a decrease of 5850 barrels, each of the other Rocky Mountain States experiencing only slight fluctuations. Arkansas produced during the week at the rate of 100,200 barrels daily, a decrease of 350 barrels; Kansas 104,800 barrels daily, decrease of 200; and Louisiana 66,150 barrels, a decrease of 1450.

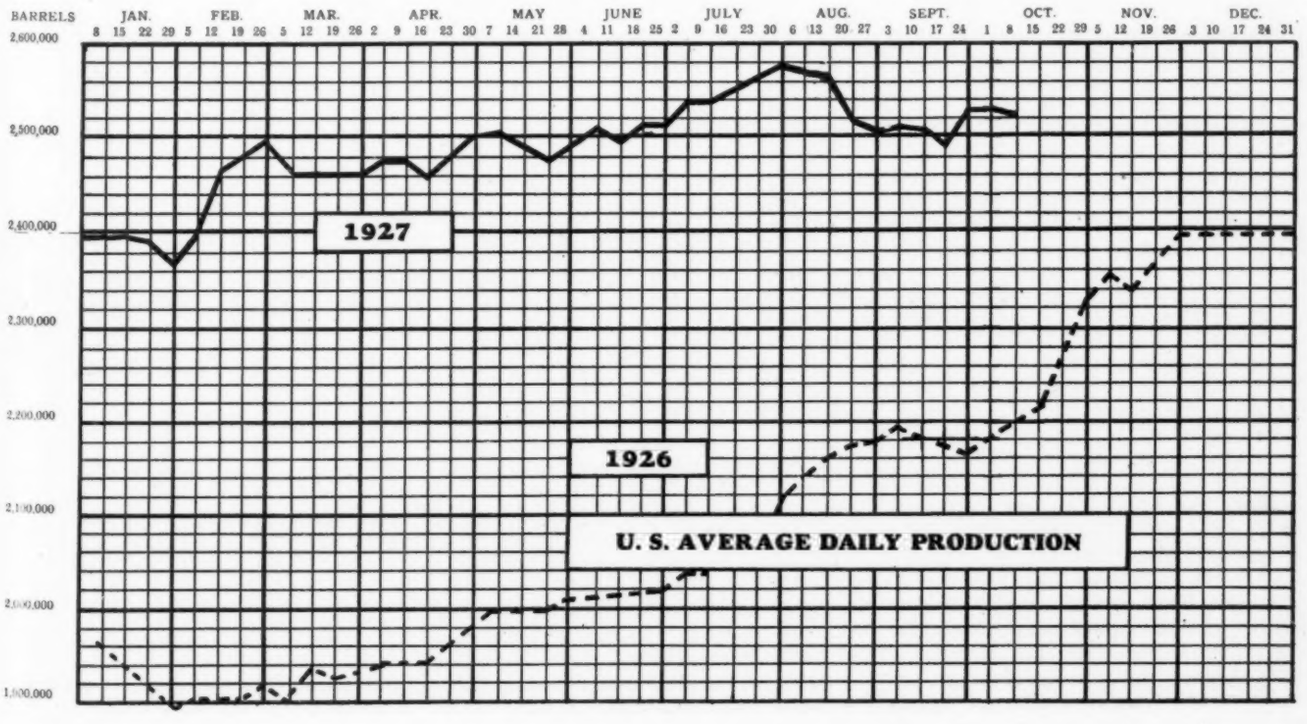
California's record of only 8225 barrels of new oil during the past week as compared with 21,380 barrels for the previous week, resulted in an 8000 barrel general decrease, despite gains in Oklahoma and Texas.

There were 342 tests completed, including 166 producers yielding a combined initial of 65,735 barrels, during the previous week out of 367 completions there were 179 producers yielding 73,694 barrels.

California's 8225 barrels of the past week came from 13 new producers, while 21,380 barrels of the previous week came from 24 wells, the average production per well thus being lower. In Oklahoma and Texas, on the other hand, the wells were as large or larger. Texas had 61 producers as against 50 for the previous week, the total initial production being 24,460 barrels, as compared with 20,837 barrels. Oklahoma's 37 new producers yielded 29,126 barrels initial, while during the previous week 33 wells gave up 25,854 barrels.

In Arkansas, Kansas and Louisiana the same number of producers were brought in the past week as during the previous week: Arkansas three, Kansas five, and

UNITED STATES CRUDE PRODUCTION TREND



DETAILS ON CRITICAL FIELDS

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	No. Producing Wells	Daily Production Barrels	Daily Production Per Well	Rigs Up	Wells Drilling
CALIFORNIA—								
Seal Beach	214	289,052	1,350	112	66,600	594	40	70
OKLAHOMA—								
Seminole	948	1,297,452	1,368	872	436,636	500	35	346
PANHANDLE—								
Hutchinson County	1,067	540,030	506	986	68,570	70	6	35
Gray County	166	57,335	345	161	11,425	71	11	28
Carson County	173	57,450	332	157	8,230	52	2	11
Wheeler County	40	14,050	351	37	1,365	37	..	11
Totals	1,446	668,865	463	1,341	89,590	67	19	85
WEST TEXAS—								
Church & Fields	146	180,280	1,235	143	97,165*	679	10	15
Gulf-McElroy	51	47,180	925	51	20,475*	401	2	2
Totals	197	227,460	1,155	194	117,640	606	12	17

*Production partially pinched.

Louisiana six; the amount of new oil from them being about the same as from the wells of the week before.

Drilling permits reported during the week aggregated only about 70 per cent of the number granted during the previous week. Arkansas and California were the only States which did not show decreases in the number of permits; the former issuing six, an increase of one, while the latter issued 16, which was the same number as during the previous week. Louisiana issued eight, as compared with 21 for the week before; Kansas eight, as against 15; Oklahoma 28, a decrease of 22; and Texas 109, a decrease of 29. The United States total was 175, as against 245 for week before last, and as against 452 for the corresponding week in 1926.

Oklahoma-Kansas

A drop of roundly 26,000 barrels in daily average production at Seminole during the five-day period from October 5 to 10 and a reduction of drilling wells from 366 to 346 during the week ending October 10, is apparently two of the healthiest things that could have happened in this crude menacing spot.

Several crude buyers have started curtailing their pipe line runs out of the field, and Magnolia, as a matter of fact, is the only company showing an increase of runs from Seminole during the week. This may be reckoned by the fact that Magnolia, for some time prior to its recent price raise of an average of 15 cents a barrel on Seminole crude, was under the market, and so received little Seminole crude. On its price increase several producers began turning their crude to Magnolia. Prairie Pipe Line Company is reported cutting its runs approximately 25 per cent at Seminole.

Mid-Continent refiners have begun curtailing their runs of crude with the coming of winter months, and some shutdowns are already noticeable. Kerosene is showing for the only active product on the refined oil market, while other refined products have shown a slight weakening during the past two weeks.

Gasoline price wars are in evidence over the Mid-Continent territory generally, striking Tulsa and Oklahoma City during the past week after being in evidence throughout Illinois, Ohio and Indiana for more than a month. Independent stations in Tulsa and Oklahoma City are cutting as low as 12 cents, and in some cases major companies are competing with these prices, especially in the immediate neighborhood.

North Texas

The higher gravity grades of gasoline and burning oils are upholding the North Texas refined market at a level that enables plant owners to gain a profit from their operations. The demand for kerosene advanced prices on this commodity to a seasonal high mark of 4⅝ cents, with some selling taking place at 4½ cents per gallon. Fuel oil in the Wichita Falls district is firm at 85 to 95 cents per barrel. Although exporters have checked their buying of 64-66 gravity gasoline after covering on current requirements late in September and early in October, the Northern jobbers have not finished loading up for the early winter demand and have been buying in sufficient quantities to hold the price in North Texas to a flat price of 7 cents per gallon.

Under-current rumors of an impending crude price change in the Mid-Continent broke forth during the past week in financial circles in the East, and is largely founded on the threat that West Texas offers from the Yates and Hendricks fields along with that now being produced in the older areas. The Texas Panhandle is believed to be at its low price level, since a flat price of 75 cents per barrel prevails throughout this district, except in Gray County, where one major buyer is posting a premium price for connections. Although Texas Panhandle crude, excepting Gray County, averaged about 37 gravity, the current price is about 20 cents per barrel under the top price paid for fuel oil at North Texas refining plants.

Willingness of many West Texas producers with flush production to sell their oil at a sacrifice under the posted price of 60 cents per barrel rather than to build steel tankage and store same, is aggravating the price structure in this section of the Southwest, and is almost certain to lead to another downward revision of prices. Oil is being offered below posted price in the Hendricks and Church and Fields areas by small operators and companies to avoid the expenditure of between 30 and 40 cents per barrel for steel to store 60 cent oil, with little prospects of tanks being salvaged after the oil is disposed of in the future, owing to the destructive elements in the oil.

Consumption of gasoline has actually been higher during the past week than the previous week or any similar period for a month. Perfect weather, the vanguard of winter tourists and improved business conditions are given as the reasons for the startling increase. Immediately after Labor Day, consumption dropped considerably, but has staged an almost unprecedented comeback. It is still below the highest figure for the late summer months but far ahead of the same date last year, according to the latest survey.

California refiners and wholesale distributors of gasoline have reduced the margin between tank wagon and station prices to 3 cents. The 4-cent differential has been in effect for some time. Where contracts have been made at a 4-cent differential, the refiners have merely increased the tank wagon price one cent. All new contracts are being let at a 3-cent differential.

The movement of fuel oil in California is entirely satisfactory, with prices for the commodity strengthening. There is very little distress stock and what remains in that category is being moved rapidly. Principal stocks are in the hands of a few of the largest companies. Bids from all over the world are being received for California stocks.

Production in California is gradually giving way and a steady decline is expected during the next few weeks.

Dale Completions Include Two Small Pumpers

Houston—The serpentine field at Dale, Caldwell County, added further disappointment to its record during the past week when Humble Oil & Refining Company's Clingingsmith 1 and Clingingsmith 2 were completed as very small pumpers. The No. 1 made 12 barrels from 2250 feet and the No. 2 was a 10-barrel well at 2110 feet.

Interest in the field has been revived, however, by the making of four new locations late last week. The Texas Company and Humble Oil & Refining Company have made locations for three new tests on the Clingingsmith tract, which they hold jointly, and The Texas Company will drill No. 4 on the Lackey lease.

The locations of the Texas-Humble tests are as follows: Clingingsmith 4: 545 feet northwest from the extreme south corner and 150 feet northeast at right angles from the southwest line; Clingingsmith 5: 796 feet northwest along the northeast line from the extreme east corner and 150 feet southwest at right angles; Clingingsmith 6: 495 feet northwest along the northeast line from the extreme east corner and 150 feet southwest at right angles. The Texas Company's Lackey 4 is located 545 feet southeast along the northeast line and 150 feet southwest at right angles to this line from the extreme north corner of the Lackey lease. The Lackey 4 is an offset to the Texas-Humble Clingingsmith 4.

The average daily production in the Dale field is now around 500 barrels. During the week that it was it its highest peak, which was less than a month ago, it produced at the rate of 1850 barrels a day.

Air-Gas Lift and Electricity Are Engineers Sessions Topics

Expect large attendance at first session of Petroleum Division, A. I. M. E. to be held in Texas; organize Texas Division

FORT WORTH.—At the coming meeting of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers, to be held here October 19-20, special attention will be given to air and gas lift problems. A number of new features will be brought out, and air and gas lift will be discussed from two angles especially; as a means of increasing daily average production, and as a means of controlling the back pressure on producing formations and thus increasing the ultimate recovery.

Heretofore, most of the thought spent on air and gas lift has been on increasing the daily average without much attention being paid to the effect on the sand. This, in the opinion of some observers, has been a serious mistake, and there are those who are firm in their opinions that ultimate production in certain fields has been materially decreased through application of air and gas lift.

Engineers with opinions on either side of the question will have an opportunity to express themselves at the meeting both through specially prepared papers and round table discussions

The section of the program devoted to air and gas lift includes papers from well-known experts on the subject, among whom are Lester C. Uren, E. O. Bennett, S. F. Shaw, F. W. Lake, L. L. Brundred, with several others Papers cover every section of the United States where air and gas lift has been applied, thus giving an excellent cross-section of results.

Due to the enormous amount of money being spent in furthering the use of electricity in producing and transporting oil, one section of the program will be given over to the use of electricity in oil-field operations. A good deal of new material is promised on this subject.

The fourth session of the meeting will be devoted to handling congealing oils and paraffin, with special information on what has been accomplished in the Texas Panhandle. An excellent summary of conditions and methods there will be given by W. V. Vietti, of the Marland Oil Company. This paper will deal with Panhandle difficulties in detail and will give something of what has been accomplished in solving the problems

Arrangements are being made to take care of at least 300 attendance at the meeting.

Following the meeting a Texas Division of the A. I. M. E. is to be organized, with Fort Worth as headquarters. The new division will include Texas and Louisiana. It is planned for the division to hold monthly meetings, which will be open to any one interested. A special paper will be read at each session.

The Fort Worth meeting is the first national meeting to be held in Texas, and for that reason a heavy attendance is anticipated.

The completed program follows:

TECHNICAL PROGRAM

First Session Wednesday, 9:30 a. m.
Air-Gas Lift

John M. Lovejoy, Chairman.

Principles Underlying the Air-Gas Lift—J. O. Lewis.

Effect of Gas Lift on Physical Properties of Oil—R. R. Brandenthaler.

Handling Recirculated Gas—R. D. Gibbs.

Mechanical Installation for Air-Gas Lift:

Texas Other Than the Gulf Coast—E. V. Foran.

Gulf Coast—L. L. Brundred.

Oklahoma and Kansas Other Than Seminole—R. W. Bond.

Seminole—C. R. Swartz.

California Practice—H. C. Miller.

Second Session, Wednesday, 1:30 p. m.
Air-Gas Lift and Gas-Oil Ratios

J. B. Umpleby, Chairman.

Air-Gas Lift Practice in Seminole—S. F. Shaw.

Air-Gas Lift Practice in California—A. C. Rubel.

Existing Information on Gas-Oil Ratios—Lester C. Uren.

Relation of Air-Gas Lift to Gas-Oil Ratios and the Bearing on Ultimate Production:

Data from Mid-Continent—E. O. Bennett.

Data from California—F. W. Lake.

Third Session, Thursday, 9:30 a. m.
Use of Electricity in Oil-Field Operations

A. C. Rubel, Chairman.

Use of Electricity in the Mid-Continent—D. L. Johnson.

Use of Electricity in Wyoming—A. W. Peake and F. O. Prior.

Relative Advantages and Cost of Electric Power in Lease Operation—L. J. Murphy.

Report of Committee on Definition for Technical Terms.

Fourth Session, Thursday, 1:30 p. m.
Handling Congealing Oils and Paraffin

E. O. Bennett, Chairman.

Summary of Existing Information—C. E. Reistle.

Problems and Their Solution in the Appalachian Field—Frank Brewster

Problems and Their Solution in the Wyoming Field—F. E. Wood.

Problems and Their Solution at Amarillo—W. V. Vietti.

Although the meeting of the Division is primarily devoted to production engineering there will be presented during one of the sessions a brief review with forecasts of the production situation by W. E. Wrather.

Luncheon will be served each day at 12 in the lobby outside the ballroom.

A smoker will be held Wednesday evening, October 19, at 8 o'clock at the Fort Worth Club. There will be an informal address by E. W. Marland, chairman of the committee on the Prevention of the Waste of Gas, of the American Petroleum Institute.

Mrs. E. O. Bennett is in charge of arrangements for the entertainment of ladies attending the meeting.

If a sufficient number of members desire to make field trips, arrangements can be made with E. O. Bennett.

Petroleum Engineers Plan West Indies Cruise

New York.—Preliminary plans are being made by the Petroleum Division of the A. I. M. E. for a West Indies cruise, which will include a visit to the Venezuela oil fields. If sufficient interest is displayed to warrant the trip, the party will sail from New York on the steamer Lapland, January 25, and will return February 19.

There will probably be technical sessions on board the ship and geological features of the different places visited will be studied.

The tentative itinerary is as follows: Leave New York January 25; arrive at Havana, January 29; Kingston, February 1; Colon, February 4; Curacao, February 6; Puerto Cabello, February 9; La Guayra, February 10; Bermuda, February 16, and back in New York February 19.

The Lapland is a luxurious 18,600-ton Red Star Line steamer and assures a comfortable voyage for those making the trip.

Magnolia Line Movement Increased During September; Refined Shipments Less

Dallas, Texas.—Magnolia Pipe Line Company's crude runs from fields in Oklahoma, Texas, Arkansas, Louisiana and Kansas during September averaged 102,080 barrels daily, as compared to 100,528 barrels daily average for the previous month. This gain of 1522 barrels was mostly from Texas fields.

During September Magnolia made an upward revision of its Mid-Continent crude prices to conform with the schedules posted by other major companies, and also started construction work on an eight-inch pipe line extension from the Central West Texas district to West Texas. This new line is to serve Magnolia Petroleum Company's rapidly growing production in Crane County, and will also take care of the company's pumping leases in Howard and Mitchell Counties. This new pipe line will be in service early next December and will handle outside oil for purchase, or transportation from West Texas.

Total crude runs made by Magnolia Pipe Line Company from fields in Oklahoma, Texas, Arkansas, Louisiana and Kansas during August and September, follows:

Fields—	August	September
Wewoka-Earlsboro	940,406	900,200
Healdton	224,725	210,279
Hewitt-Graham	165,772	146,693
Cushing	149,259	139,628
Seminole	34,149	79,925
Yale	65,184	60,279
Duncan	57,785	56,797
Augusta (Kansas)	46,894	46,059
Walters-Beaver Creek	9,208	8,132
Burbank	89	82
Totals for Oklahoma and Kansas	1,693,471	1,648,074
Luling	396,650	388,720
Panhandle District	160,830	151,026
Crane County	74,973	109,071
Electra	110,440	104,750
Mirando District	85,822	81,770
Burkburnett	83,351	79,198
Archer County	56,471	51,930
Mexia-Wortham	45,091	42,073
Lytton Springs-Lockhart	38,175	38,691
Howard-Mitchell Counties	23,338	29,868
Desdemona-Comanche	20,528	20,354
Corsicana-Powell	16,748	15,531
Ranger-Olden	12,192	12,339
Stephens County	11,634	10,804
Corsicana (Heavy)	9,905	8,668
GulfCoast-Spindle Top	9,614	6,049
Petrolia-Clay County	4,417	4,259
Thrall-Williamson County	1,375	1,313
Panola County	1,158	1,628
Totals for Texas	1,161,712	1,158,042
Smackover	116,719	120,732
El Dorado	22,878	19,592
East El Dorado	.....	2,304
Totals for Arkansas	139,597	142,628
Pine Island	46,443	39,741
Cotton Valley	38,225	35,745
Bull Bayou	33,651	35,398
Haynesville	3,283	2,775
Totals for Louisiana	121,602	113,659
Totals for five state	3,116,382	3,062,403

Although Magnolia's crude runs from fields in Oklahoma continue at a high level, the pipe line shipments from this state exceeded crude receipts during September for the first month since last December. Magnolia withdrew 119-198 barrels of oil from storage in Oklahoma during September, leaving a balance of 6,062,711 barrels on hand at the close of the month.

Water shipments of fuel oil made during September by Magnolia from its docks on the Gulf Coast dropped to a low level of 5,932,174 gallons, as compared to 9,773,488 gallons, in August. Tanker shipments of refined oils (gasoline, kerosene, naphtha, lubes, etc.) dropped from 39,637,483 gallons in August to 29,827,512 gallons in September. Water movement of crude oil to Atlantic Coast refineries remained steady, with a total of 763,432 barrels shipped in 11 separate tankers during September.

Prairie Shipments Show Loss in September

Tulsa.—Prairie Pipe Line Company shipped 5,321,179 barrels of crude during September, a total less than the shipments of any month since February of this year and a decrease of 465,643 barrels from the August shipments. The decrease during September is explained as being the result of backing up of crude in the various fields.

Prairie's shipments by month for the year are as follows:

January	4,850,792
February	4,736,228
March	5,449,688
April	5,484,826
May	5,641,544
June	5,788,133
July	5,505,551
August	5,786,822
September	5,321,179

Prairie has 26 fifty-fives up in the Seminole area and jointly owns with the Indian Territory Illuminating Oil Company four 80s. The two companies are now jointly building 14 eighties and have grades for seven more eighties. At the close of September the Prairie had 1,304,139 barrels in storage at Seminole besides 157,429 barrels stored jointly with the I. T. I. O. Company. At that time the Prairie had an empty capacity of 99,861 barrels and 156,571 barrels owned jointly with the I. T. I. O. Company.

Pure Oil Company received into its lines during August a total of 1,051,129 barrels of crude oil, a daily average of 33,907 barrels. This included 1,025,754 barrels from wells and 25,375 barrels from other lines. Of this total there were 860,887 barrels of Oklahoma oil and 190,241 barrels of Pennsylvania oil. Pure had in storage on September 1 a total of 1,700,365 barrels, including 1,409,330 barrels of Oklahoma crude and 190,241 barrels of Pennsylvania crude. The Pure lines in Texas received 458,671 barrels in August, 455,526 barrels being from Seminole and the remainder from the Coahoma pool in Howard County, Texas.

The Pure had 27 fifty-fives up at Seminole the last week in September with 756,848 barrels in storage there, and a net room of 692,152 barrels. The company had no further storage under construction in the Seminole area at that time.

Spindletop Well Flowing From 5850 Feet

Houston.—Although the new producers completed in the Texas Gulf Coast during the past week were confined to only two fields, Spindle Top and Pierce Junction, the amount of new oil was comparatively high, aggregating 8040 barrels, approximately one-third of the total new production of the State. This oil came from seven wells, four at Spindle Top and three at Pierce Junction.

The most interesting as well as the largest of the new producers was the Sun Oil Company's McLean 14 at Spindle Top. It was completed last Friday, flowing 3500 barrels from 5850 feet, making it the deepest producer thus far completed in the field. Incidentally it is probably the deepest well now producing in the Gulf Coast, the Pure Oil Company's Sweet Lake 3 in Cameron Parish, Louisiana, which has held that distinction, with a depth of 5897 feet, being at present sanded up.

The oil of this new producer at Spindle Top is of 27.6 gravity, the same as that found in the 2800-foot horizon in previous completions. The McLean 14 is an offset to Gulf Production Company's Oakwood Realty Company 12, which was brought in only a few days earlier as a 90-barrel pumper at 5500 feet.

The two other wells completed during the week at Spindle Top were: Yount-Lee Oil Company's Gladys 41, which came in for 1200 barrels from 2900 feet, and Gulf's Gladys 226, a 150-barrel producer at 750 feet.

The largest well for the week at Pierce Junction was Cullen et al's Howe 3 on the east side of the field, was completed for 2500 barrels of 29 gravity oil from 4848 feet. The other two new producers in the field included Rio Bravo Oil Company's Settegast 6-A, a 500-barrel well at 3600 feet and the same company's Bender 2, completed for 200 barrels at 3600 feet.

Completions in Coastal Texas during the week also included one gas well, Humble Oil & Refining Company's Kujewa 1 at Raccoon Bend, Austin County, and three failures.

Frank Kelsey, vice president in charge of Texas operations of the Independent Oil & Gas Company, with headquarters at Fort Worth, has resigned, effective October 10. Kelsey will continue in the oil business, but will take a vacation before announcing his future plans.

West Texas Has Big Tank Building Program Under Way

Operators consider use of earthen storage in addition to large nnmber of steel tanks built and building

By H. H. KING
Staff Representative

FORT WORTH, TEXAS.—Steel storage tanks are being pressed into service in greater numbers to take care of the crude produced in the West Texas district above available market outlets, and at the close of last week the district was credited with having 20,316,000 barrels gross capacity completed, building and contracted. Of this amount 14,390,000 barrels capacity is in service, or ready for use.

The growing volume of shut in production in the Yates shallow field, Pecos County, is not being brought above ground beyond actual pipe line facilities in accordance with a 90-day proration agreement endorsed by all but one of the big producers in the field. However, tentative plans are being made by several of the operators in this field to erect concrete or gunite lined reservoirs to store their oil upon the termination of the proration plan. The typography of the field is adaptable to the use of such type of storage tanks, owing to the presence of canyons, and excavating costs would be cheaper than usual. Tanks of about 500,000 barrels capacity are being considered by Simms Oil Company and Roxana Petroleum Corporation. The use of large reservoirs were approved by the Texas Railroad Commission during the flush days of the Texas Panhandle district, but operators seeking the permit did not have occasion to build same, because of downward trend in production and temporary relief obtained by the completion of a railroad line into the heart of the Hutchinson County field about the time the tanks were to be built.

The Hendricks field, Winkler County, is the scene of the next major tank building program in West Texas, while the Church & Fields area, Crane County, has been the most active for the past half year, with a big program ahead for some of the operators without adequate pipe line connections. The Hendricks field has more than one-half million barrels of large tankage completed and in use, with 1,148,000 barrels building and contracted. This field is dependent upon two small lines terminating at tank car racks in an adjoining county, and has more tests underway than any other field in the district, with small operators in control of a large amount of the proven acreage. More than 30 tests have been drilled to the top of the big lime pay horizon in the Hendricks field, and tankage is being erected to start drilling in some of these tests within a few weeks, thereby forcing the hand of other nearby lease owners to protect their acreage from drainage.

Large steel tanks completed, building and contracted for in 11 counties in West Texas aggregates 20,316,000 barrels gross capacity, of which 14,390,000 barrels is completed and 5,926,000 barrels is scheduled for completion in a few months. The completed and building tankage is shown below by counties:

Counties—	Gross Capacity Completed Tanks	Capacity Tanks Building
Crane	5,984,000	1,918,000
Crockett	55,000	.....
Jones	55,000	.....
Midland	755,000	820,000
Mitchell	420,000	.....
Pecos	586,000	80,000
Reagan	2,947,000	.....
Upton	2,947,000	.....
Val Verde	800,000	1,200,000
Ward	245,000	485,000
Winkler	553,000	1,148,000
Totals	14,390,000	5,926,000

Church & Fields

The Church & Fields area has afforded a big volume of business for tankage concerns, owing to production having exceeded pipe line outlet for months. A few of the operators in this field have contracts for the sale of a fixed amount of crude daily to Humble and Southern Pipe Line Companies, and those not fully protected with pipe line outlets have been forced to erect tankage to store their excess production as a means of drainage protection. The Church & Fields area has almost six million barrels of steel storage facilities completed, and nearly two million barrels of new tankage underway, while the peak point of production in the field has not been reached.

Landreth Production Corporation, Fort Worth, is the largest user of steel storage in West Texas, having completed and contracted for 31 55's and ten 80's to serve its properties in the Church & Fields and Hendricks fields, making 2,500,000 barrels of facilities. Landreth's principal tank farm is located on the company's producing lease on the south end of the Church & Fields area, and now has 22 55,000 barrels steel tanks completed, and nine building. This lease is 400 feet wide and three and eight-tenths miles long, with 16 producing wells. The strip offers room for 31 tanks, same being spotted in a straight row between wells. Nineteen tanks have been filled with oil on this lease. Having filled all tank locations on this lease, Landreth took surface lease on the northeast quarter section 8, block "X," Crane County, last week, and ordered seven 80,000 barrel steel tanks for immediate erection. Landreth also placed order last week for three eighties for immediate erection in the southwest quarter of section 29, block B-5, Winkler County, to store a portion of the company's production in the Hendricks field. Landreth is operating jointly in the latter field with Roxana, but each is to handle their own portion of the production. Landreth has a contract with Southern Crude Oil Purchasing Company to sell its portion of the Hendricks field production, but complete relief is not assured during the flush period of the field.

Eastland Oil Company and J. D. Collett-O'Keefe Interests, Fort Worth, have also been forced to build a large number of tanks in the Church & Fields area because of being restricted to 5000 barrels daily on Humble's purchases. The former interests have completed 17 55s and one 64,000 barrel tank and two more 55s are under construction. Five of these large tanks are on the 80-acre producing lease, and the remainder are on a tank farm located several miles southwest of the producing area. Southern Pipe Line Company is gathering this oil and transporting it to the latter tank farm for 2 cents per barrel.

Simms Oil Company and Atlantic Oil Producing Company, operating jointly in the Church & Fields area, are in the midst of a big tank building program, but are erecting tanks and storing oil separately. Simms has 12 55s completed and six more under construction in the Church & Fields area. Atlantic has ten 55s completed and one building in the field, and is building all future tanks at a new farm near Midland, located on the Texas Pacific railroad. Atlantic has four 55s and two 80s under construction at the Midland farm, and has arranged with Magnolia Pipe Line Company to transport the crude from the Church & Fields leases at about 10 cents per barrel. Atlantic will have the choice of

using either tank cars or Magnolia's line in relaying the oil stored at Midland to its export terminals at Beaumont. Atlantic is also erecting two 80s in the Hendricks field, and has started surveying route for an eight-inch line to be built from the latter area to the Midland tank farm. However, actual construction of this proposed line which will require about 70 miles of pipe, will not be started until Atlantic's Hendricks field production justifies same.

The Illinois Pipe Line Company, transportation branch of the Mid-Kansas Oil & Gas Company, which is sharing a big end of the proven area in the Yates shallow oil field, Pecos County, with Transcontinental Oil Company, has the largest single tank farm under way in West Texas. Illinois has completed ten and at work on 15 80,000 barrel steel tanks at Del Rio, with an eight-inch line connecting same to the Yates field. The line is scheduled to be completed about November 1. Illinois also has four 55s in the Yates field and four 55s on a tank farm near Hurdle, Upton County. A six and an eight-inch line connects the latter farm with the Yates field, but 14,000 barrels of this pipe line capacity is being leased to Humble.

Independent Oil & Gas Company lost its pipe line connections in Crane, Winkler and Upton Counties with the Southern Pipe Line Company October 5 after being served by the latter since October, 1926, and immediately let contract for two 55,000-barrel steel tanks to be erected in the Church & Fields area and the Hendricks field, with an additional number planned. Independent's contract with Southern had expired some months ago, but connections were not severed until last week. Independent has about 2100 barrels of production in the Church & Fields area, 825 barrels on the Crane-Upton County line, and a small well in the Hendricks field, with two tests shut down on top of the pay horizon.

Odd sized tanks have put in their appearance on West Texas tank farms in large numbers as result of old 55,000 barrel tanks being cut down and moved from settled fields in Texas and Oklahoma and rebuilt with an added ring or two. Humble Pipe Line Company favors this plan in particular, and has a number of 64,000 barrel capacity tanks scattered among its West Texas tankage. Atlantic Oil Producing Company is erecting two 74,000 barrel tanks in the Church & Fields area, Crane County, having dismantled same in the East Central Texas district, and added extra rings.

Both wood and steel roofs are being used for covering large tanks in West Texas, but the latter do not have a long life when subjected to the sulphur gases escaping from the stored oil. Considerable thought is being given to the corrosion trouble on the roofs and upper rings of the storage tanks by West Texas operators, and a variety of chemicals and paints have been used with little success in combatting the destructiveness of the corrosive elements in the crude oil.

West Texas Storage

A complete survey of all large steel tankage in use, under construction and contracted for in the West Texas district on October 10, 1927, is listed below by counties:

	Number Tanks Completed	Number Tanks Building	Size Tanks In Bbls.	Location, Section, survey and block--
CRANE COUNTY—				
Atlantic Oil Prod. Co.	6	..	55,000	se¼ sec 46, blk 30, University Lands
Atlantic Oil Prod. Co.	4	1	55,000	ne¼ sec 45, blk 30, University Lands
Atlantic Oil Prod. Co.	.	2	74,000	ne¼ sec 45, blk 30, University Lands
Chu ch-Fields-Weekly	1	1	55,000	e½ sw¼ sec 39, blk 30, University Lands
Eastland Oil Co. et al	1	.	64,000	w½ nw¼ sec 47, blk 30, University Lnds
Eastland Oil Co. et al	4	.	55.000	w½ nw¼ sec 47, blk 30, University Lnds
Eastland Oil Co. et al	13	2	55,000	ne¼ sec 11, Louis Yarbrough survey
Gulf Production Co.	2	.	80,000	ne¼ s'c 202, blk "F", CCSDRNG Ry sur
Humble Oil & Ref. Co.	6	.	55,000	nw¼ sec 36, blk 30, University Lands
Humble Pipe Line Co.	2	.	55,000	ne¼ sec 216, blk "F", CCSDRNG Ry sur
Independent Oil & Gas	.	1	55,000	e½ nw¼ sec 46, blk 30, University Lnds
Landreth Prod. Corp.	22	9	55,000	Strip lease, sur 10, blk "J-C"
Landreth Prod. Corp.	.	7	80,000	ne¼ sec 8, blk "X", CCSDRGNG Ry sur
Magnolia Pipe Line Co.	2	.	55,000	nw¼ ne¼ sec 45, blk 30, University Lnds
Magnolia Pipe Line Co.	4	.	55,000	se¼ se¼ sec 44, blk 30, University Lnds
Pecos Oil Company	4	2	55,000	sw¼ sec 47, blk 30, University Lands
Pecos Oil Company	1	.	37,500	sw¼ sec 47, blk 30, University Lands
Prairie O&G Co.	2	.	55,000	ne¼ sec 47, blk 30, University Lands
Simms Oil Company	6	.	55,000	se¼ sec 46, blk 30, University Lands
Simms Oil Company	6	6	55,000	ne¼ sec 45, blk 30, University Lands
Southern Pipe Line Co.	1	.	55,000	ne¼ sec 41, Louis Yarbrough survey
The Texas Company	1	.	37,500	w¼ sec 22, blk 35, H&TC Ry sur
CROCKETT COUNTY--				
Humble Pipe Line Co.	1	.	55,000	s½ sec 2, blk "BB", N. A. Miller sur
JONES COUNTY--				
Phillips Pet. Co.	1	.	55,000	nw¼ sec 19, blk 19, T&P Ry sur
MIDLAND COUNTY—				
Atlantic Oil Prod. Co.	.	2	80,000	n½ sec 40, blk 38, T&P Ry sur, T-1-S
Atlantic Oil Prod. Co.	.	4	55,000	n½ sec 40, blk 38, T&P Ry sur, T-1-S
Gulf Pipe Line Co.	6	.	80,000	s½ sec 41, blk 38, T&P Ry sur, T-1-S
Gulf Pipe Line Co.	4	.	55,000	s½ sec 41, blk 38, T&P Ry sur, T-1-S
Magnolia Pipe Line Co.	1	8	55,000	sec 43, blk 38, T&P Ry sur, T-1-S
MITCHELL COUNTY—				
Col-Tex Refining Co.	1	.	55,000	s½ sec 42, blk 26, T&P Ry sur
Col-Tex Refining Co.	1	.	35,000	s½ sec 42, blk 26, T&P Ry sur
Col-Tex Refining Co.	3	.	15,000	ne¼ sec 21, blk 28, T&P Ry sur, T-1-N
Magnolia Pipe Line Co.	6	.	55,000	w½ sec 47, blk 29, T&P Ry sur, T-1-N
PECOS COUNTY—				
The California Co.	1	.	55,000	sec 34, blk 194, GC&SF Ry sur
Humble Pipe Line Co.	4	.	64,000	e½ sec 58, blk 1, I&GN Ry sur
Illinois Pipe Line Co.	2	.	55,000	e½ sec 61, blk 1, I&GN Ry sur
Illinois Pipe Line Co.	2	.	55,000	e½ sec 62, blk 1, I&GN Ry sur
Roxana Pet. Corp.	.	1	80,000	n end sec 61, blk 194, GC&SF Ry sur
Simms Oil Company	1	.	55,000	sec 103, T. C. Ry sur
REAGAN COUNTY—				
Big Lake Oil Co.	12	.	55,000	sec 11, blk 2, University Lands
Humble Pipe Line Co.	6	.	64,000	s½ sec 11, blk 11, University Lands
Reagan County Pur. Co.	16	.	80,000	sw¼ sec 11, blk 11, University Lands
Texon Oil & Land Co.	9	.	55,000	secs 35 and 36, blk 9, University Lands
UPTON COUNTY--				
Humble Pipe Line Co.	17	.	55,000	n¼ sec 65, blk 35, H&TC Ry sur
Illinois Pipe Line Co.	2	.	55,000	nw¼ sec 19, blk 1, MK&T Ry sur
Illinois Pipe Line Co.	.	2	55,000	ne¼ sec 34, blk 1, MK&T Ry sur
Marland Pipe Line Co	6	.	80,000	e¼ sec 64, blk 35, H&TC Ry sur
Marland Pipe Line Co.	4	.	55,000	e¼ sec 64, blk 35, H&TC Ry sur
Prairie Oil & Gas Co.	.	2	55,000	sec 31, blk 42, T&P Ry sur, T-5-S
Southern Pipe Line Co.	2	.	55,000	nw¼ sec 64, blk 35, H&TC Ry sur
Texas Pipe Line Co.	1	.	64,000	w¼ sec 66, blk 35, H&TC Ry sur
T. P. Coal & Oil Co.	1	.	80,000	sec 5, GC&SF Ry sur
T. P. Coal & Oil Co.	1	.	55,000	sec 5, GC&SF Ry sur
VAL VERDE COUNTY—				
Illinois Pipe Line Co.	10	15	80,000	sec 9, blk "B-3", I&GN Ry sur
WARD COUNTY—				
American Pet. Co.	2	2	55,000	w½ se¼ sec 81, blk "A", GMMB&A sur
Southern Pipe Line Co.	.	4	80,000	sec 20, blk "F", GMMB&A sur
Southern Pipe Line Co.	2	1	55,000	sec 20, blk "F", GMMB&A sur
Southern Pipe Line Co.	1	.	25,000	sec 20, blk "F", GMMB&A sur
WINKLER COUNTY—				
American Petroleum Co.	2	.	37,500	se¼ sec 35, blk B-5, P. S. L. sur
Atlantic Oil Prod. Co.	.	2	80,000	ne¼ se¼ sec 31, blk B-5, P. S. L. sur
Church-Fields-Weekly	.	.	80,000	w½ ne¼ sec 29, blk B-5, P. S. L. sur
Gulf Production Co.	2	.	80,000	nw¼ sec 34, blk B-5, P. S. L. sur
Humble Pipe Line Co.	2	2	64,000	sec 8, blk B-12, P. S. L. sur
Independent Oil & Gas	.	1	55,000	e½ nw¼ sec 41, blk B-5, P. S. L. sur
Landreth Prod. Corp.	.	3	80,000	sw¼ sec 29, blk B-5, P. S. L. sur
Murchison-Cranfill	1	3	80,000	sw¼ ne¼ sec 7, blk B-12, P. S. L. sur
Pure Oil Company	.	2	55,000	
Roxana Petroleum Corp.	.	1	80,000	n½ sw¼ sec 40, blk B-5, P. S. L. sur
Southern Pipe Line Co.	2	1	55,000	n½ ne¼ sec 6, blk B-12, P. S. L. sur

Start Fruitvale Wildcat

Bakersfield, Calif.—The Pacific- Eastern Production Company is ready to begin drilling its Fruitvale wildcat, near this city, having completed a steel derrick for the test. The well was located on the theory that the gas and oil sands encountered in the company's Union Avenue well, east of the city, continue through the district.

Sacramento, Calif.—Nearly 100 applications for oil exploration permits in the Santa Barbara National forest have been filed with the federal land registrar here, following the discovery that several small tracts of land were still open. Prospectors have been searching maps for all available open tracts and have been rewarded with the discovery of many small open tracts, lying near the Cuyama valley and elsewhere.

Small Wells Slowing Operations At Seminole

Production level cannot be held up at present rate of small completions; Little River not conceded so good as belived

By WALLACE DAVIS
Staff Representative

TULSA.—Chances for re-establishing a reasonable production level in the Greater Seminole area were looking better early this week than at any time since the discovery of the Little River pool. An immediate evidence of falling production and a continued decline in field activity plus less possibilty for new flush production in view, tended to give the territory that aspect.

The production gauge for the five pools in the area for the 24-hour period ending at 7 a. m. Monday was 436,636 barrels, which represents a decline of 25,997 barrels within five days. Monday's gauge was a drop of 9199 barrels from the previous day, a drop that came in the face of a 1737 barrel gain at Little River. Production for the five pools for Sunday and Monday and for Wednesday of last week is as follows:

	Oct. 5	Oct. 9	Oct. 10
Earlsboro . . .	185,076	178,128	168,163
Bowlegs . . .	138,620	128,896	128,566
Seminole	70,346	69,400	68,941
Little River...	36,706	39,006	40,743
Searight	30,904	30,405	30,223
Totals	462,633	445,835	436,636

Tuesday morning's gauge gave the Seminole area 437,418 barrels from 889 wells, of which Little River contributed 37,997 barrels from 28 wells, the latter pool continuing its decline despite the completion of two new wells.

Total operations in the Seminole area showed a decrease of 14 during the past week, including locations, rigs, inactive rigs and drilling wells, while there was a decline of 20 drilling wells. The decline of 20 during the week brought the total for the past four weeks to a decline of 90 drilling wells, giving the five pools early this week 346 drilling wells, or 398 operations including 15 locations, 35 rigs and 30 wells shut down.

Slowing Down

Operations are declining at a rate of approximately 100 per cent more than the new locations in the area are adding to the field activity. Facing this status the production level cannot hold as it has been holding throughout the summer months because it has taken the continued addition of large flush wells to maintain the high average, and such wells of recent date have failed to show up as in the earlier period of development. Few wells of oustanding value have been completed in the five pools within the past two weeks, and completions as a whole have averaged far less than 1000 barrels. Earlsboro, the strongest of the five producing spots during the summer, looks like the first to give way to a big drop. Its east and northeast extension are now drilled up to about the point the original pool was developed at the time of a drop of around 60,000 barrels in three weeks. Continental Oil Company got a 6000 barrel well in its Hollins 4, in the northeast of the northeast of the northwest of section 12-9-5, October 6, following a 15-quart shot in Wilcox sand at 4230-44 feet, the most important well completed in more than two weeks. Independent Oil & Gas Company' Gaines 4, in the southwest of the northeast of the northeast of section 11-9-5, made 1100 barrels flowing and swabbing from 4390-4408 feet October 6. Outside of these two wells little new production of great consequence was opened in the field during the past week.

Little River

Little River is considerably weakened in the opinions of most operators, due to the erratic performance it has shown. It has the earmarks of turning out to be a much smaller pool than was originally predicted there. More than 50 per cent of the wells completed at Little River during the past three weeks have been swabbed before they would flow, and at this writing there were three wells on the swab, two on air and two off production out of the 25 producers. More than one-half of the flowing wells were making less than 1000 barrels.

The best well added to Little River during the past week is Indian Territory Illuminating Oil Company's House B-1, in the northeast of the southeast of section 2-7-6, which produced 1679 barrels Sunday from 4375-81 feet. The same company's Nitey 8, in the northeast of the northwest of the northeast of section 2-7-6, came in Saturday when swabbed, making 58 barrels in 24 hours from 4288-91 feet, and increased Sunday to 775 barrels on the swab after deepening two feet. I. T. I. O. Company's Dugan 2, in the northeast of the southwest of the southeast of section 35-8-6 was dead Monday morning after coming in October 4 as a small producer from 4337-38 feet, I. T. I. O. Company's Soketeche 5, in the northeast of the northwest of the northeast of 1-7-6, swabbed 537 barrels October 7 from the Wilcox at 4202-03 feet. I. T. I. O.'s Nitey 4, in the southwest of the northeast of section 2-7-6, got a hole full of water from the first Wilcox at 4337-75 feet, and Monday was drilling at 4435 feet with water still in the hole.

During the first week in October there were a total of 859 oil wells, including 91 wells off at the time. Only 185 of this number were flowing. There were 357 being produced by air or gas lift, 120 on the pump and 96 swabbing Two hundred and three of the producers were making salt water, including 113 at Seminole City, 47 at Earlsboro, 23 at Bowlegs, 17 at Searight and three at Little River.

This particular time is deemed one of the most important at Seminole in considering the probable trend of the area's production curve. Directly in line with this is an important bearing on the Mid-Continent crude market since the coming of winter is bringing less demand for the crude oil. First of all, Little River is expected to be pretty well outlined within the coming month. Producers, as mentioned above, are not looking for so much here as was at first expected, due to erratic turns in the field, as development has spread to find edge wells not so far from the centralized play. Next, Earlsboro is expected to have passed the dangerous mark within the coming month with the rapid completion of development in the east and northeast extension, together with the heavy appearance of salt water in the settled sections of the field. Bowlegs is considered practically drilled up as well as condemned on all sides for extensions. Seminole City and Searight fields are no longer considered more than a proposition of dumping their present yields on the market at a rate gradually less all along.

Extension Possibilities

The opening of new areas in the Seminole region, apart from the present producing sections, is not unlikely, yet there are no better looking wildcats showing than those formerly failing after presenting high possibilities of adding new territory. I. T. I. O's School Land 1 wildcat, in 16-8-5, is shut down with a show of oil in the

Hunton lime, a location six miles south of Earlsboro. Barnsdall's wildcat in 22-7-6, two and three-quarter miles south and slightly west of Little River, is shut down with a show of oil in the Viola-Gypsy's Seminole 1 wildcat in the southwest corner of 5-8-6, is shut down in the Viola at 4190 feet, located northwest of Bowlegs and south of Earlsboro, and the Amerada is drilling one-half mile to the south. Barnsdall has a wildcat in 14-8-5, which is also attracting considerable attention, bringing the number of possible pool openers, which now stand in the limelight, but which so far have strictly observed the commission order and the unwritten law of holding down possible menacing pools to five.

The present status of field activity within the five pools of the Greater Seminole area is outlined in the following table:

Field—	Lcns.	Rigs.	S. D.	Dr. Above 2000 Ft.	2000 to 3100 Ft.	3100 to 3700 Ft.	Below 3700 Ft.	Total
Little River	4	21	10	5	8	22	46	106
Seminole	1	..	2	..	3	1	12	19
Searight	2	..	1	5	..	7	13	27
Bowlegs	4	7	10	3	8	12	68	102
Earlsboro	4	7	9	5	16	25	87	144
Totals	15	35	32	18	35	67	226	398

Deepest Oklahoma Well Holds Up Flow

Tulsa. — That Roxana Petroleum Corporation's McCully 1 near Marshall, northwestern Logan County, will lead to the opening of an important field is indicated by the performance of the discovery well, which late last week, 100 days after completion June 29, was making 2570 barrels of 43.5 Baume gravity crude from 5987 feet with the tools still in the hole. It is the deepest producer in the Mid-Continent territory, and today is bidding stronger than any former strike for more centralized play toward the western part of Oklahoma.

The McCully 1 is located in the southwest corner of the northeast quarter of the southeast quarter of section 30-19-4w. Roxana controls the bulk of choice acreage around this phenominal producer, and at present has five wells going down in the area as offsets or in the immediate vicinity. Furthermore the company has a four-inch line completed 19 miles to Covington pool, a point on several major lines. Plans are ready to increase moving facilities on completion of other wells warranting more line capacity.

Roxana's Sebronak 1, in the southeast of the northeast of section 30-19-4w, was waiting on cement to set around casing at 4546 feet. Its Freelove 1, in the southwest of the southwest of section 29, was drilling October 7 at 3223 feet in shale and shells. Ross 1, in the northwest quarter of section 29, was shut down to repair the rig with a total deph of 4535 feet. The Stephens 1, in the southwest quarter of section 29, had a total depth of 4653 feet in shale, and Williams 1, in the northwest quarter of section 32-19-4w, was 4004 feet in broken sand which was topped at 3987 feet.

L. H. Wentz's Williams, located in the northeast of the northeast of section 31-19-4w, was standardizing at the close of the past week. Sinclair Oil & Gas Company's Weber 1, in the southeast of the southeast of 16-19-4w, had completed the rig last week. Twin States Oil Company and the Prairie Oil & Gas Company were drilling around 1600 feet in their Moore 1, a joint test in the northeast of the northeast of section 33-18-4w. Twin States has location staked for L. Shaeffer 1, in the northwest of 20-19-4w, and is building the rig. Champlin Refining Company's Musgrove 1, in the southeast of the southwest of section 16-19-4w, is a location.

In the vicinity north of the Crescent area, Logan County, Ramsey Brothers and J. V. Bailey's Lovell 1, in the southeast of the northeast of 16-18-4w, had cemented casing at 3981 feet. Texas Pacific Coal & Oil Company's Rahe 1, northeast of the northwest of section 27-18-4w, was drilling around 4500 feet. Blackwell Oil & Gas Company's Sade 1, northeast of the southwest of section 28-18-4w, was nearing the 4000 foot level. Sinclair's Knecht 1, southwest of the northeast of 28-18-4w, was around 2400 feet. Marland Oil Company's Lovell 1, in the northeast of the northeast of section 16-18-4w, was preparing to spud.

Sarah Whipple Well is Pinched to 1500 Barrels

Tulsa.—The Sarah Whipple pool five miles northeast of the old Garber field, Garfield County, was producing more than 1500 barrels at the middle of last week with all three of the wells pinched down with back pressure. Marland Oil Company staked two locations early in the week for immediate drilling following Skelly Oil Company's Wilcox 1 late in September.

Marland's Garber 2 is located 300 feet east and 980 feet south of the northwest corner of the southeast quarter of section 19-23-3w, and the Rhodes 1 is 660 feet west of the northeast corner of the northwest quarter of section 30-23-3w. The latter test is a trial for an extension of the deep field. Garber 1 is in the vicinity of the discovery well.

Marland's Sarah Whipple 1, in the northeast corner of the nortehast of the southwest of section 19-23-3w, was making 796 barrels the middle of last week from the Wilcox at 5313 feet, its Garber 1, the discovery well in the southwest corner of the northwest of the southeast of the same section was doing 297 barrels from 5283 feet, and Skelly's Wilcox 1, the newest producer, located in the southeast corner of the southeast of the northeast of section 19, was making 424 barrels with 110 pounds of back pressure.

The only other active location at the completion of Skelly's well is the Amerada - Champlin Refining Company's Wilcox 1, in the southwest of the southwest of the northeast of section 19. It was fishing for a piece of bit at 4096 feet. It is an east offset to the Skelly well and a north offset to Marland's Garber 1.

Skelly Oil Company had made no further locations late last week.

Beardon Pool Extended By Gas Producer

Tulsa.—The Beardon pool of Okfuskee County was extended a half mile southwest last week by the Future Development Company and Schermerhorn Oil Company's Brown 1, in the center of the southeast of the northeast of section 20-10-9, which made 50,000,000 cubic feet of gas from the Papoose sand topped at 3244 feet and penetrated to 3280 feet.

This extension well has been closely watched by geologists during the course of its drilling, and is considered a strike of considerable importance. The possibility of oil pay from the Wilcox on the left flank of the structure looms bright now, in the opinion of a number of geologists and operators. The Wilcox on top of the structure has failed to produce oil in several cases. The well is about four miles east of the eastern boundary of Seminole County.

Aside from the present production from the Papoose sand the hole produced 20,000,000 feet of gas in the Doggett sand around 2750 feet and 5,000,000 feet in the Gilcrease sand at 3100 feet.

The owners have 320 acres in the vicinity, including the southeast quarter of the northeast quarter and southeast quarter, and the south half of the southwest quarter and the northwest quarter of the southwest quarter of section 20-10-9. Barnsdall and the Gypsy Oil Company are holders of some acreage near the well.

Gas from the Beardon field has been in use for some time in the Seminole area, piped there for use in gas lift on Seminole wells and as fuel for drilling.

Catalog Announcement

The Parkersburg Rig & Reel Company, Parkersburg, West Virginia, has recently published Catalogs describing Parkersburg drilling equipment and tankage.

There are eight of these catalogs covering rig irons, sand reels and calf wheel outfits, steel wheels, steel derricks and steel crown blocks, all-steel standard rigs, portable drilling machines, wood and steel, chain driven sand reels and bailing reels, bolted steel tanks, and miscellaneous drilling equipment.

Potential Production of San Joaquin Valley Fields Reviewed

Composite estimates gives five fields in region important possibilities; market conditions restrain development

By BRAD MILLS
Staff Representative

THE eastern and southeastern slopes of the San Joaquin Valley have furnished several interesting oil fields, which have, in the main, been only partially developed. Singularly enough, many of the fields are controlled by very few interests and for that reason have not been drilled as extensively as areas in which several dozen independent operators strive to outdo one another.

Conditions have curtailed operations in many instances and the lack of development in the territory under discussion has not resulted as much from a patriotic desire to leave the oil underground as from the fact that throwing heavy oil on an already overburdened market was not logical from a business standpoint. There is no doubt but that all five fields along the eastern fringe of the San Joaquin Valley would be developed as extensively as the accompanying table shows, should the call for crude really demand it.

The word "potential" is rather a dangerous one, and theory sometimes influences us to overestimate actual possibilities. Gas pressure, varying sand conditions and a dozen other factors enter into the development of any oil field. In speaking of the potential possibilities of any proven area, there is always the chance of miscalculation, even with extensive data at hand. The perfect structure has not yet been found, and it is safe to say that all the fields under discussion in this article will prove to be irregular in many respects.

Potential Production

Potential production, as questionable as it sometimes is, could easily mean the difference between a shortage of petroleum products and an ample supply. Especially would this be true in case of a national emergency. While the five small fields along the eastern fringe of the San Joaquin Valley may not be able to play a heroic part in case of actual need, their potential possibilities are, nevertheless, very interesting and not as insignificant as the present production seems to indicate.

When a field is not extensively drilled, it is fairly safe to predict a larger production, in the event an additional number of wells are completed. The potential output of a half-drilled field should not be rated as twice its present production, however. Each well slightly reduces the output of its neighbor, but, at the same time, should materially increase the total production of the field. Where a field has more than one producing sand, as might be the case in some of the fields in question, it is possible to more than double present production by drilling even less than an equal number of additional wells.

POTENTIAL PRODUCTION SAN JOAQUIN VALLEY FIELDS

Field—	Probable Maximum Acreage	Producing Wells	Present Developed Prod.	Initial Prod. Per Well	Potential Wells	Probable Potential Prod.	Probable Settled Prod. Per Well
Kern Front	3,000	125	*10,000	100-400	600	30,000	50
Wheeler Ridge	320	30	*1,200	200-400	60	3,000	50
Mt. Poso	700	12	*5,000	250-1000	140	28,000	200
Kern River	7,000	1,900	*12,000	8-15	2,000	15,000	7½
Round Mountain	600	1	500	100-500	120	12,000	100

*Includes shutin production.

Although other small fields may have considerable potential production, only the Wheeler Ridge, Kern Front, Mt. Poso, Kern River and Round Mountain fields will be considered. They represent the bulk of the undeveloped acreage along the eastern side of the valley and offer the greatest possibilities in case of actual need.

Wheeler Ridge

The Wheeler Ridge field lies in the extreme southeastern end of the San Joaquin Valley and about 33 miles south of Bakersfield. It is nearly 20 miles from the nearest production in the Sunset field. The first commercial well was completed late in 1922 by the Standard Oil Company, after the two previous efforts had failed. The Standard Oil Company controls practically the entire field.

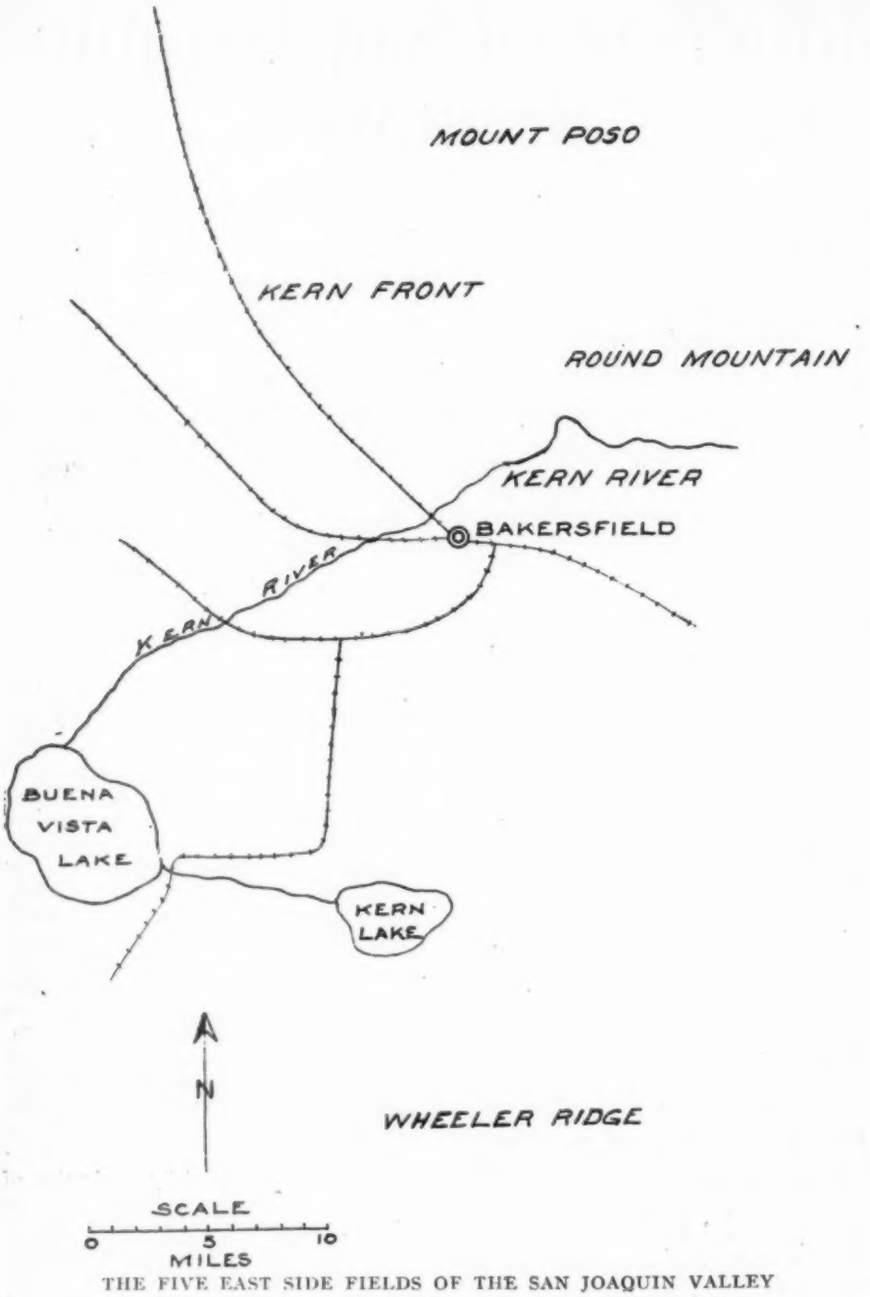
The probable maximum producing area is close to 320 acres, although slightly less than that amount has been proven. The field is one of the smallest in the entire valley. About 30 wells have been drilled and a production of more than 1200 barrels has been developed. The initial production of the wells varies from 200 to 400 barrels. By placing one well to each five acres, at least 60 wells could be drilled. It is fairly safe to say that each well will produce at an average rate of 50 barrels daily, if pushed to capacity. The potential production approximates 3000 barrels, and possibly more if the lower sand, which recently has shown much promise, proves as productive as the first deep well indicated and is developed as extensively as the first producing horizons. The gas pressure in the deeper sand is 500 pounds per square inch. The field is adjacent to trunk pipe lines and the potential output can be handled as fast as developed.

Kern Front

The Kern Front field is much younger than its nearest neighbor, the Kern River field, and, being much less developed, has a far greater potential possibility. The field was discovered in 1919 and has been developed slowly. A careful survey shows the probable maximum producing area to be 3000 acres. Considerably less than that amount has been proven but new extensions are altogether possible. The structure is a long, narrow, freakish strip, shaped somewhat like a crescent. The field now has 125 producing wells, with a developed production around 10,000 barrels. The initial production of the wells is extremely variable, due to an irregular sand condition, but usually runs from 100 to 400 barrels. The field would easily support 600 wells, should the need arise. The present average production per well is nearly 100 barrels. Giving each of the 600 wells an average daily production of 50 barrels, we arrive at 30,000 barrels as the probable potential production of the field. The figure is much less than the average estimate but is used in preference to some of the more optimistic amounts, which are liable to be entirely out of line, in case the edge wells go quickly to water. The field is really in its infancy and is potentially one of the strongest producing areas in the region. The tendency of other fields nearby to produce consistently for years teaches us that much should be expected of the Kern Front field.

Mount Poso

The Mount Poso field is one of the newest lying along the eastern slope of the San Joaquin Valley, but is potentially one of the best, regardless of its unimposing acreage. The first wells were drilled in 1926 and little effort has been made to develop the field. The first wells were very good producers, having yielded as high as 1000 barrels on actual test. The average initial production of the various wells completed was much higher than in other fields nearby. It was evident from the beginning that the field would occupy a prominent place, should an intensive



THE FIVE EAST SIDE FIELDS OF THE SAN JOAQUIN VALLEY

drilling campaign ensue. Fortunately, the field is controlled by a very few interests and hardly a dozen wells have been completed. No oil is being marketed, although the present shut-in production is 5000 barrels. The field has not yet been served with pipe line connections. The present proven area is 700 acres, with the possibility of still further extensions. If intensively developed, the field should easily accommodate 140 wells. The average settled production should be at least 200 barrels per well, since some have produced 1000 barrels. In that case, the potential production of the field should be 28,000 barrels, with an excellent chance of exceeding even that amount. The field is small, however, and the chance for sustained production is not as good as in some of the larger fields having smaller wells.

Kern River

The Kern River field is the largest and oldest structure on the eastern side of the valley, and by far the best developed. The field was discovered in 1900 and rapid development followed. More than 1900 wells have been drilled. The field, unlike its younger neighbors, has passed through several periods requiring all the oil the country could supply. It was during these periods of actual need that development was most intense. As the cycles of underproduction came and went, so the barometer of activity rose and fell in the Kern River field. Many of the wells are now idle. The present production is little more than 6000 barrels, with about an equal amount shut in. The field is so thoroughly developed that little more than 100 additional wells could profitably be drilled. The average initial production is from eight to 15 barrels, and the settled production slightly less. In case of actual need, the field's 2000 wells should produce 15,000 barrels daily, an increase of only 3000 barrels over the present maximum production. The field covers about 7000 acres, with little chance for further extensions.

Round Mountain

The Round Mountain field is the least proven and developed of any lying along the eastern fringe of the San Joaquin valley. The structure has been estimated to be from two to six miles in length and from one to three miles in width. With only one well completed, any definite prediction as to its potential possibilities is merely a matter of guesswork.

With one 500-barrel well completed, it is safe to say that many more can be drilled and a large production developed, despite recent failures on the flanks of the structure. These wells were not given more than an even break for production in the beginning.

If it is assumed that the field contains only 600 acres, it is possible to arrive at an estimate of its potential possibilities. The Mount Poso field is not unlike Round Mountain in some respects, and has been proven to contain 700 acres. By trimming down the Round Mountain field to 600 acres, the estimate should prove conservative. There are indications that the field will be several times as large, but only the drill can determine that. By drilling one well to each five acres, the field should easily care for 120 wells. Like the Mount Poso field, the wells promise to have a fairly large initial production and the settled output should average at least 100 barrels per well. The potential output of the entire field seems to be near 12,000 barrels. The potential output has been placed as high as 25,000 barrels. It is only through correlation that such a doubtful field can be estimated. Its neighbors, where the faulted conditions have been similar, have developed into very good fields, but have been comparatively small. There are several reasons why the Round Mountain field should be a very good one, but surface conditions cannot always be relied upon.

The accompanying table was compiled from the latest estimates of several geologists who have worked extensively in all the field involved. It was a very difficult matter to obtain the opinion of any one expert on more than one or two fields. The table is all the more valuable, because it incorporates the ideas of several geologists and engineers, who were careful to make estimates on only those areas with which they were thoroughly familiar. In calculating the potential production of any field or district, it is only possible to arrive at an approximate figure.

New Shallow Production Uncovered In Pecos County

Two good completions in Yates field shut in for next proration test; Hendricks field operators build tanks

SAN ANGELO, Texas — Two big producers were completed on inside locations in the Yates shallow field during the past week, including the California Company's Smith 1, located in the northeast corner of section 35, with an initial flow of 500 barrels of pipe line oil per hour from regular pay at 1296 to 1331 feet.

This heavy producer was shut in, as it will not be entitled to share in the pipe line proration plan now in effect until the next field gauge is taken on October 15.

Mid-Kansas and Transcontinental's Smith-Taylor 2, an east offset to Gulf's Smith well, was reported to be making 95 barrels hourly while drilling lime pay at 1255 to 1375 feet.

Roxana scored its second producer in the Yates field early this week, flowing 600 barrels daily from regular lime pay at 1537 to 1562 feet. This well is on the Smith lease, and is a north offset to the Redbank extension well on the southwest side of the field.

Mazda Oil Corporation and Savoy Oil Company's Smith 1, an east offset to Redbank's producer, is drilling ahead with 150 feet of oil in the hole from 15 feet of pay at 1470 feet.

The encroachment of water on the east side of the Yates field has been confined to the three wells that first developed water trouble.

Hendricks Field

New tankage and increased pipe line facilities are drawing the attention of operators in the Hendricks field, Winkler County, owing to the number of tests that are ready for completion. Southern Crude, Landreth and Pure announced new tanks for the field during the past week, while the former has made arrangements to parallel its pipe line to the railroad with a six-inch carrier. Pure is also planning a line to tank car rack, while Atlantic is surveying route for an eight-inch line from Hendricks field to its tank farm at Midland. Atlantic is arranging to concentrate its Crane and Winkler production at Midland, then ship same to tidewater via Magnolia Pipe Line Company's trunk line or via tank cars.

Atlantic will not build the line from Hendricks field to Midland until a few big wells are drilled in on its leases.

Marland Oil Company's Clay 1, lease "E," section 138, uncovered a deeper producing horizon on the Chalk field, Howard County, during the past week in sand at 2470 to 2525 feet. This well was swabbing about 150 barrels daily early this week.

Transcontinental Oil Company's wildcat test on the Blackstone & Slaughter ranch in Southeastern Pecos County promised a new shallow field for West Texas early this week when oil production estimated good for about 25 barrels daily was encountered in brown sandy lime pay at 1510-30 feet. This wildcat is located in the southwest part of section 29, block 129, T. & St. L. Ry survey, and logged the top of the lime formation at 1508 feet, with a surface elevation of 3539 feet. Commercial oil production at this point would throw a vast amount of acreage in Pecos and part of Terrell Counties into an active lease and royalty play.

A new peak production level for the Church & Fields area, Crane County, was reached during the past week when the field averaged 97,165 barrels daily from 143 wells. This gain was due to releasing a part of the shut in production into new tankage. Simms Oil Company and Atlantic Oil Producing Company, operating on a 50-50 basis, accounted for 33,985 barrels of the daily output, and then did not have all their wells flowing at maximum output. These interests are storing all but 10,000 barrels of their daily production. Prairie Oil & Gas Company and the Tidal Oil Company & Turman-Maxwell interests also have considerable production shut in, but the former is erecting tankage to relieve the situation, while Tidal et al are holding current output to 10,000 barrels, which is the amount Southern Pipe Line Company is contracted to take until next February.

Magnolia Pipe Line Company began running oil via its eight-inch line from the Church & Fields area to tank farm at Midland October 5, and will also handle considerable oil for Atlantic on a common carrier basis.

Magnolia Petroleum Company has placed an order for four 150-horsepower Ingersoll-Rand electric motor drive compressors to be used in the first installation of an air plant in the Church & Fields area.

Landreth Production Corporation is producing about 15,500 barrels daily from 16 wells in this field, and late last week had 1,045,400 barrels of oil in storage on the lease.

Barbers Hill Well Has Oil In Hole; Will Pump

Houston.—The Fee 9 well of the Mills Bennett Production Company and the Moody Corporation at Barbers Hill was ready to be put on the beam about the middle of this week, with the fluid standing within 500 feet of the top of the hole, which is 3214 feet deep, the top of the oil sand being at 3185 feet. The well gave promise of producing from 250 to 400 barrels.

Humphreys Corporation's Kirby B-5 at the same time was drilling at 4515 feet, and other of the three operations in the field, Sam Hindman et al's Fisher 1, was at 3350 feet in sandy shale, no show.

Humble Oil & Refining Company is preparing to drill deeper in Myers Fee 4.

The status of field operations in the Hendricks field, Winkler County, Texas, at the close of last week is shown below:

Operators—	Locations	Dks & Rigs	Drilling Tests	Shut Down on Lime	Completed Wells	Initial Prod.	Present Prod.
Amerada Petroleum Corp.	..	..	1	..	..	....	....
Arizona Mining & Eng. Co.	..	1	..	..	..	....	....
Atlantic Oil Producing Co.	..	1	2	1	..	....	....
Geo. M. Church-Fields, et al	..	1	..	..	..	....	....
Cranfill-Bros. Oil Co.	..	..	..	..	..	....	....
Cranfill-Reynolds, et al	1	..	1	1	..	....	....
Gulf Production Company	..	1	..	5	1	4,500	*895
Humble Oil & Refining Co.	..	1	2	3	..	....	....
Independent Oil & Gas Co.	..	..	1	2	.	....	25
Landreth Prod. Corp. & Roxana	..	2	..	2	1	1,600	*900
Liner Drilling Co., et al	..	1	..	..	..	....	....
Marland Oil Company	2	..	1	1	..	....	....
Joe Maxwell & L. C. Tuman	..	1	1	..	..	....	....
Murchison-Cranfill & Marland	2	..	1	..	1	5,000	605
Murchison-Cranfill, et al	..	..	..	1	..	....	....
Pure Oil Company	1	2	..	3	..	5,000	*930
Republic Prod. Company	..	1	1	1	..	....	....
Roxana Petroleum Corp.	..	2	1	2	..	....	....
Southern Crude Oil Purchasing Co.	..	1	3	8	5	8,345	*7,100
Texon Oil & Land Co.	..	..	3	1	..	....	....
Totals	6	15	18	31	8	24,995	10,455
Totals previous week	9	15	16	30	9	23,395	9,940

*Production partially pinched.

South End of Wilcox-Pampa Has Production Excess

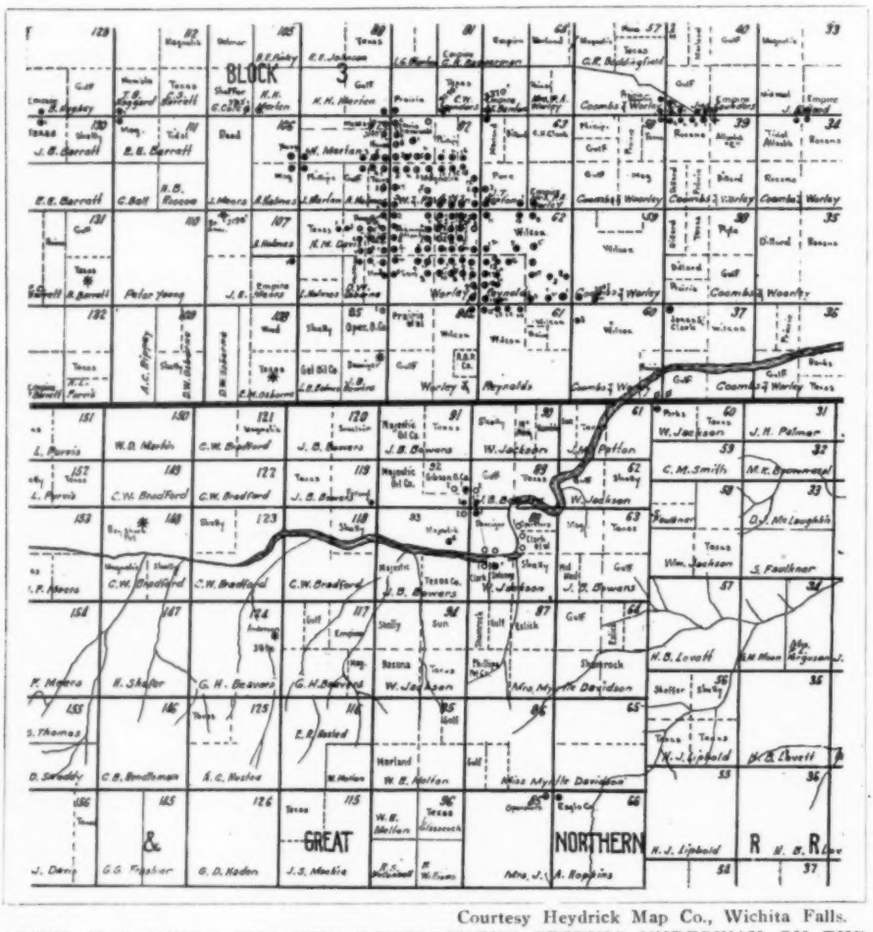
Declining production in Hutchinson and Carson Counties gives healthier tone to market there where stocks are being drawn

AMARILLO, Texas—Flush production uncovered recently in the south extension of the Wilcox-Pampa field, Gray County, has exceeded pipe line facilities, and an eight-inch pipe line is being built by the Sinclair Crude Oil Purchasing Company from its Pampa rack to supplement a small line built to the area last May when the Majestic Oil Company's Bowers 1 was completed as a producer. New locations have followed the completion of the M. J. Delaney et al's W. Jackson 1, which blew in on the last day of September with an initial output of more than 5000 barrels of 44 degree gravity oil, and during the past week six rotary rigs were moved in on new locations.

Sinclair ran more than 25,000 barrels of pipe line oil from the Delaney well during the first week, and the production was holding at about 190 barrels per hour early this week. This well is located in the northwest corner of the east half of the southwest quarter of section 88, block B-2, and is producing from broken lime and granite wash pay at 2844-2985 feet, with a surface elevation of 2994 feet. Clark and associates of Wichita Falls purchased the adjoining 80 acre lease to the west recently for $1000 per acre, of which one-half was paid in cash and the remainder payable from one-half of the first oil. Clark et al also own lease on the south half of the northeast quarter of section 88, having paid $25,000 cash and $20,000 in oil for the 80-acre tract late last month. Two rotary rigs have been moved in on the latter tract, and one location has been made in the former to offset the producer. Danciger Oil & Refining company et al have made two locations to offset the Delaney producer, and Clark et al's Jackson 1. Gulf Production Company is building rotary rig for Bowers 2, which is to offset Gibson Oil Corporation's Bowers 1, which was mentioned as a new completion last week with an initial flow of 1400 barrels at 3122 feet. Danciger et al's Jackson 1 increased its flow to 85 barrels hourly when deepened to 3064 feet.

Declining production in Hutchinson and Carson Counties in recent weeks has developed a healthier crude market situation in the Panhandle, as the current demand from local refineries, tank car and pipe line shipments exceeds production. During the week ending October 4, the district is credited with having shipped 63,100 barrels daily via the Humble, Gulf-Magnolia and Prairie lines; 21,000 barrels daily via tank cars, and about 9000 barrels daily was consumed by local plants. This movement resulted in about 3500 barrels daily being withdrawn from storage, which amounted to about 18,500,000 barrels on October 5. The district has steel storage facilities for about 23,700,000 barrels of crude.

Independent operators and companies operating producing properties in Hutchinson County are not making a profit from their producing wells since a flat price of 75 cents per barrel was posted by all purchasers August 23, and are endeavoring to sell their holdings at sacrifice prices. The arrival of cold weather has increased the operating expense on pumping leases, owing to the oil congealing. Settled leases can be purchased in Hutchinson County from small operators on a barrel production basis that has not been equaled since the closing days of the Smackover field's flush career.



Courtesy Heydrick Map Co., Wichita Falls.

ABOVE MAP SHOWS THE NEW DEVELOPMENT GETTING UNDERWAY ON THE BOWERS AND JACKSON LEASES IN THE SOUTH EXTENSION OF THE WILCOX-PAMPA FIELD, GRAY COUNTY, TEXAS

Dome Producer Sands Up Again

Houston.—Roxana Petroleum Corporation's Allen Bernard 1, only well that has ever produced on the Allen Dome, Brazoria County, is again sanded up, and efforts are being made to bail out the sand. The present depth of the well is 5153 feet, including 19 feet of sand. It began spraying oil at the rate of about 30 barrels a day recently after being deepened from 5137 feet, where it sanded up May 15 after flowing 700 barrels during 24 hours following its completion. After coming in for the second time, it produced for more than a week, the rate of production gradually climbing up to nearly 50 barrels a day.

Roxana's Allen 4 on the same dome is reaming brittle shale at 5303 feet. Random 1 is rigging up.

At Clemons Dome, also in Brazoria County, Roxana's Bell 2 is drilling below 3679 feet in shale, while their Pabst 2-A on the same dome has been abandoned at 6319 feet.

Possible New Field Indicated in Santa Barbara County

Barnsdall Oil Company has large tract around well making 250 barrels oil with gas and water; Seal Beach declining

By BRAD MILLS
Staff Representative

LOS ANGELES.—What appears to be an entirely new field has been discovered in California by the Barnsdall Oil Company, about three miles west of the Goleta field, Santa Barbara County. The discovery well, Edwards 1, is flowing 250 barrels of 41 gravity oil and an equal amount of water from 2481 feet. The well was drilled to 2720 feet but plugged back for the production test.

The Barnsdall Oil Company has 1500 acres leased adjacent to the well and apparently controls the greater part of the structure. The company has the entire Edwards ranch under lease. The exact location of the well is section 36-4-30 and far enough away from the Goleta field to be classed as an entirely new discovery. There is a difference of opinion as to whether the quality of the oil should link the discovery with the Goleta field, which is also a light oil district. It is generally conceded, however, that the discovery is bona fide.

The same water conditions seem to prevail in the Barnsdall well as in some of those drilled in the Goleta field, but other correatlions are considerably different. Any other light oil discoveries in the district in the future may also be bothered with water, even though they may be many miles away.

The Barnsdall acreage was not looked favorably upon by companies which were especially anxious to obtain acreage in the Goleta field. The fact left the Barnsdall Oil Company comparatively free to obtain the most promising leases on the western structure.

The new well is producing 2,000,000 cubic feet of gas along with the oil. The gas shows a gasoline content of three gallons to the thousand cubic feet. The casing pressure is 500 pounds and the tubing pressure 400 pounds. The well is producing from about 10 feet of sand but more probably could be utilized.

The Barnsdall lease calls for the continuous running of one string of tools. Another well will be drilled at once. No intensive development campaign is anticipated by the company.

Rincon Structure

Staging an almost sudden comeback the Chanslor-Canfield Midway Oil Company's Hobson 1A well, located on the Rincon structure in Ventura County, has again developed into a very promising wildcat. The well is making considerable gas and a trace of oil from a total depth of 6955 feet. The company plans to run a three-inch liner and test the well when a depth of 7000 feet is reached. This well attracted much attention at a depth of 6300 feet but failed on a production test. A string of 4¾-inch casing was cemented at 6350 feet.

Deeper drilling failed to improve the outlook of the Pacific-Eastern Production Company's Union Avenue well, near Bakersfield, and the hole will be plugged back to 4393 feet to further test the possibilities of the gas sand which caused so much excitement more than two months ago. The formation below 4394 feet showed sand and shale, with some oil and gas, but did not warrant a test.

Seal Beach

Judging from its latest antics, the Seal Beach field is headed downward. The field, which has nettled the California statisticians for some months, still has plenty of fire but should not wield the big stick much longer. Production is still above 66,000 barrels, with several good wells to be recompleted within the next two weeks.

A recent survey of the field showed 70 wells drilling, of which 22 are original wells and 48 are being deepened after a previous completion. Idle wells are increasing almost every day. There are now 25 idle wells in the Alamitos sector alone. The cost of reaching the deep sands and the possibility of small production have caused a large number of shutdowns.

No new wells were completed during the week, but eight old wells were recompleted. The total initial production was 7200 barrels and the average per well 800 barrels. The Marland Oil Company's Selover 16 and the Petroleum Securities Company's Murphy 1, the former a 2100-barrel producer and the latter a 2000 barrel well, were the only important recompletions of the week.

Goleta

After drilling through several hundred feet of very doubtful formation in Goleta 1, the Miley Oil Company has encountered a sandy shale at 5375 feet which is showing a fair amount of gas. The well was intended as a deep test of the Goleta field and has had a surprisingly small number of showings after passing below the light oil sands at 1500 feet. The test is now drilling at 5386 feet, with some gas still in evidence. The Santa Barbara Oil Company has had much trouble with Hollister 1A, which was originally drilled to 1600 feet. A string of 6¼-inch casing was set at 1570 feet, but the proper water shutoff was not effected. The well was then plugged back and perforated pipe set from 1520 to 1536 feet. The second test showed plenty of gas but no oil. The situation is rather a puzzling one and there is some doubt as to the commercial value of the well, although it is located near oil production. The well may develop into a valuable gasser and may even make a good oil well, but will have to be changed considerably from its present status.

Kern Front

The Kern Front field continues active, with two completions recorded during the past week. The Petroleum Securities Company scored heaviest with the completion of Robinson 1A as a 300-barrel producer. The well is located on section 22-28-27 and was finished at 2495 feet. The General Petroleum Corporation completed Wetmore 13, section 14-28-27, as a 175-barrel well at 2025 feet. The oil was 16.7 gravity and practically clean. The Associated Oil Company, one of the latest active entries into the field, has practically completed its first well—No. 56, section 23-28-27. The well was drilled to 2090 feet and is being put on the pump. The company has extensive holdings in the field but has been content to let the oil remain underground. Recent offsets have made it necessary to drill, however.

Round Mountain

The abandonment of the L. & B. Producing Company's well on section 19-28-27, along the northwestern flanks of the Round Mountain field, practically eliminates the chance of production in the immediate region. The test was taken to 2520 feet, a depth to prove beyond question that the main producing sand does not extend a great distance towards the north and west. The well showed shallow streaks of oil sand but there was not the slightest chance for commercial production.

The Elbe Oil Company, discoverer of

the field, is drilling well below 2650 feet in its second test on section 20-28-29 and is reported to have had several showings below 2600 feet. The present formatioin is a hard, gray shale and sand, with only faint showings. The second well is only half a mile south of the discovery well and its failure in the principal producing sand was a keen disappointment. In spite of unsatisfactory conditions in the second well, the Elbe will continue to develop the field. Recent rumors are to the effect that the Honolulu Consolidated Oil Company is negotiating for the purchase of the Elbe properties in the field, but no definite announcement has been made. Much of the land is held under federal permit and government permission would be necessary for the completion of any transfers.

The St. Helens Petroleum Company has met with little success in its effort to extend the field into section 13-28-28. The company's first well is drilling at 2600 feet, but has failed to find a sand of much promise. Several showings were encountered but they were far from commercial. The test is located slightly farther from the Elbe discovery well than the L. & B, well, but apparently found better showings below 2000 feet. There is little likelihood that the St. Helens will develop into an extremely deep test of the northwestern flanks of the structure.

Ventura

The sensation of the week in the Ventura field was the completion of the Petroleum Securities Company's Orton 2 as a 2600-barrel producer from 6248 feet. The gas production was about 2,000,000 cubic feet. The well is the second completed on the Orton lease, the first one, which is still flowing 1500 barrels, having been brought in last January.

G. J. Magenheimer has changed his mind on the course to pursue in Hartman 1 and has stopped drilling at 7320 feet. The well showed much promise around 6500 feet, but failed on actual test. It was then decided to continue the well to 8000 feet if necessary. A coarse, gray sand usually a very bad omen a such a depth, was found at 7320 feet and a decision to discontinue drilling resulted. The latest plan calls for a plug at slightly less than 7000 feet and a perforated liner from 6100 feet to the new bottom to test a long series of possible producing zones logged at several depths. The general opinion is that the well will not be a commercial one but it will be given every chance to produce before abandonment. The failure of the well has caused other operators to abandon plans for immediate offsets.

Cat Canyon

Production in the Cat Canyon field has been given a distinct boost by the completion of a 400-barrel producer by the R. & G. Oil Company. The well is one of the best yet finished in the field and was completed at 3225 feet. The district produces some of the heaviest and most viscous oil in the state.

Huntington Beach

The area lying just outside the Huntington Beach field is alive with leasing activity, due to the recent discovery of a very promising oil sand in the Calnan Petroleum Company's test about one mile northeast of the producing limits of the field. The Miley Oil Company has acquired control of the well and is finishing it. The hole has been reamed to bottom, with drilling continuing at 4575 feet. The well supposedly had more than 30 feet of oil sand below 4400 feet but no test was made. Strictest secrecy is being maintained by the Miley interests.

Other wildcats drilling with the intention of further extending the Huntington Beach field have failed to make much headway. The Petroleum Securities Company has abandoned Mills 1, which was drilled on the theory that an extension might be decveloped on the Mills properties. The well was drilled to 4660 feet. Very few showings of either gas or oil were encountered. J. A. Brower and Leo Stein, independent operators, are each drilling wells pust outside the field. The former's Huntington 1 is drilling in a sandy shale below 2800 feet and the latter is drilling in a shale at 1930 feet.

In the main Huntington Beach field results have been somewhat slower than anticipated, considering the large number of active drilling wells. A recent survey disclosed more idel rigs than ordinarily supposed, but many are expected to resume drilling in the immediate future. The Globe Lease and Royalty Company has completed No. 3 as a 250-barrel producer from 4360 feet. The settled production is practically as high as the initial. The crude was 18.6 gravity and cut only one per cent. The California Petroleum Corporation has completed Buck 4 at 4485 feet but has made no test. Several other wells are nearing completion and should be finished within a few weeks. Among those nearing the final stages are the Standard Oil Company's Pacific Electric 15 and the Ward Petroleum Corporation's Matthews-Burman 7. Both wells are nearing 4000 feet, with sand conditions indicating better than average wells.

Long Beach

Operations in the Long Beach field are not extensive, but a larger percentage of the total number of rigs are active than in many of the other settled fields in the Los Angeles basin. Approximately 25 wells are drilling, with the possibility that new wells will just about equal those completed from time to time. Several wells are also being deepened. The California Petroleum Corporation is completing Davidson 6 as the deepest producer ever drilled on Signal Hill. The company had had very good luck with the well, only one string of casing having been run. The 11¾-inch casing was set at 2850 feet. Total depth of the well is 5675 feet. The California-Eastern Oil Company has been much less successful in drilling Fee 2, due to a very difficult water problem below 4700 feet. The well was originally drilled to 4805 feet, with the 6¼-inch casing set at 4750 feet. A plug was set at 4675 feet, but the water situation has not been mastered, despite a third attempt at cementing. The well is making a considerable amount of salt water.

Brea-Olinda

Production in the old Brea-Olinda field was given a boost by the completion of the Shell Company's Orange 10, which was a 250-barrel producer from 5310 feet. The oil was 23 gravity and cut a full 10 per cent. It is expected to clean up soon. The Brea Canyon will get another deep test as soon as the Brea Canyon Oil Company can assemble the necessary equipment. The test will be located on the east edge of the field. The company is already drilling another deep test in another part of the field. The Shell Company still remains the peer in the matter of deep tests, its Columbia 40 having reached a depth of 7000 feet.

Older Fields Active

An analysis of the weekly press bulletin by the Division of Mines & Mining shows that the majority of permits issued are for wells in the older fields. Soon after the discovery of a new major field, permits have run heavily toward it. It is significant to note that the most recent major discovery, Seal Beach, has hardly averaged one permit per week for several months. The maximum rate was passed quickly and the older fields, where the drilling of a well usually means at least commercial production. Promising wildcat structures have been getting a fair play but the old fields are expected to continue in the lead for new locations until another major district is discovered.

Following the partial success of the Associated Oil Company, the Hurst Oil Company has located a well within the city limits of Inglewood and will begin drilling as soon as possible. The well will be located in the northern part of the city, section 28-25-14, and about a mile and a half northwest of the well drilled by the Standard Oil Company on section 27-25-14. Many efforts have been made to secure production south and east of the Hurst location but, with the possible exception of the Associated Oil Company's Cypress 1, all have failed. The location was made on the theory that the structure extends northwest from the Associated well, which had a small flow of oil from 4450 feet.

PERSONAL MENTION-MEN YOU KNOW

L. L. Brundred, formerly connected with the National Supply Company, with headquarters at Houston, has resigned his position to engage in private consulting work in production engineering. Mr. Brundred, who is one of the associate vice-chairmen of the American Institute of Mining & Metallurgical Engineers, has specialized in gas lift engineering for several years and will be located in the Petroleum Securities Building, Los Angeles.

R. W. Shaw, assistant to the vice-president and general manager of the Rio Bravo Oil Company, has returned to Houston after spending a vacation of three weeks in California.

E. R. "Dad" Folmar, purchasing agent for the Magnolia Petroleum Company, stole a march on his fellow workers October 2 and was married to Miss Pearl Mattison, also an employe in the purchasing department, in Dallas, and departed immediately on a honeymoon in Southwest Texas.

Palmer Hughes, sales manager for the Simms Oil Company with headquarters at Dallas, has resigned, and will make his home in California.

Glenn Conden, publicity director of the Skelly Oil Company, spent several days last week in Kansas City attending the Four State's Oil Jobbers convention.

Irvin S. Stewart, chief geologist of the California Petroleum Corporation, has returned to Los Angeles after an extensive business tour of Texas and Louisiana.

H. J. Steiny, formerly geologist of the Associated Oil Company, in charge of Northern California fields, has been placed in charge of all the Associated's resident geologists in California and Colorado. Mr. Steiny will also be in charge of the company's Los Angeles office, due to the transfer of Joseph Jensen, chief geologist, to San Francisco headquarters.

L. J. King, vice president of the Associated Oil Company, in charge of production, has been transferred from Los Angeles to the home office in San Francisco. The company has inaugurated a new conference plan which necessitates the presence of all officials at very frequent intervals.

R. L. Lucas, president of the Lucas Drilling Company and a resident of Okmulgee, Oklahoma, for the past 10 years, died at his home October 1. He was associated with the W. C. Newman Corporation, and was well known throughout the State. He is survived by his widow, his mother, Mrs. Martha Lucas of Butler, Pennsylvania; and seven brothers, C. W. Lucas of Okmulgee; J. E. Lucas of Wetumka; Dick Lucas of Toronto, Pennsylvania, and Andrew, Nobel, P. D., and F. W. J. Lucas, all of Butler, where the body was moved for burial. He was 50 years of age.

THOMAS B. SLICK
Of Tulsa and San Antonio, one of the most successful independent oil operators in the Mid-Continent field.

Officers of the petroleum division of the American Chemical Society have been elected at the Detroit meeting as follows: J. B. Hill, Jr., Atlantic Refining Company, chairman; Professor Fred W. Padgett, University of Oklahoma, vice chairman, and Carl Johnson, Manhattan Oil Company, secretary.

H. S. Haynes of the Huastica Petroleum Company, Tampico, Mexico, made an inspection trip through the Greater Seminole area en route to his home from Tulsa recently. He has been visiting fields of the United States for some time, and came from California to Tulsa to attend the exposition.

Lee C. Moore Company representatives returning to their respective headquarters from Tulsa following the close of the exposition are John F. Stephens, secretary-treasurer, and Walter D. Reese, sales representative, both of Pittsburgh; W. H. Payne, Dallas, Texas; M. R. Gayle, Shreveport, La., and R. G. Gordon, Wichita, Kan.

Dean Reifel, member of the Prairie Oil & Gas Company scouting department in the Seminole district, was married October 4 to Miss Cora Marie Grother of Paola, Kansas. They spent their honeymoon in Kansas City.

M. A. "Mike" O'Brien, secretary of the Eastland Oil Company, Fort Worth, departed last week on a vacation trip to Southwest Texas.

F. J. Omo, of the Texas Pacific Coal & Oil Company, is on a business trip to Chicago. He will spend several days at the University of Michigan where certain research is being carried on with Texas Pacific products. Mr. Omo will be away from Fort Worth for about two weeks.

J. A. Atwell, vice-president; A. S. Palmer, general superintendent, and H. R. Longaker, manager of the supply division of The California Company, subsidiary of Standard of California with headquarters at San Francisco, visited the West Texas properties of the company during the past week. The California Company is among the largest lease owners in the Yates shallow field, and has a district office at Colorado, Texas.

M. C. McDowell, assistant superintendent of the Rio Bravo Oil Company, has returned to Houston following a 10-day absence, during which he attended the exposition at Tulsa and the National Safety Congress at Chicago.

G. H. Delano, representative of the Ingersoll-Rand Company, Mexico City, has returned to that city after attending the International Petroleum Exposition at Tulsa.

Frank DeLuce, representative of the A. M. Byers Company in the Mid-Continent territory, Clyde Layton, air superintendent for the Tidal Oil Company, Wyle Martin, general produc-

tion superintendent of the Sinclair, Emmett Dougherty, assistant production superintendent for Sinclair, and George Hannon, assistant production superintendent for the Mid-Continent Petroleum Corporation, left Tulsa early last week for Pittsburg to attend the world series. Following the games they plan to make an inspection tour of the A. M. Byers mills at Pittsburgh.

Professor W. L. Foster is in charge of the University of Tulsa geological department, the eighth session of which opened recently. An interesting feature of this department is an extension course offered by the university to business men, and a class is offered on Wednesday and Friday nights at the Boston Avenue Methodist church and the city hall, respectively. At the end of the school term a field trip is made to the Arbuckle Mountains for practical laboratory work.

D. J. Brown, vice president and general manager of the Oil Well Supply Company, and Clark Reed, also vice president, both of Pittsburgh, headed the group of oil well supply men who attended the International Petroleum Exposition in a body. Others among the group were W. B. Glover, sales representative, Pittsburgh; Frank Weigand, district manager, Shreveport; H. J. Morlong, district manager, Fort Worth; J. M. Post, district manager, Tulsa, and J. D. Lemex, director of specialties, and sales managers from each district.

Fred Plank, superintendent of the Oil Well Supply Company's boiler shop, Oswego, N. Y., is on a business trip in South America, visiting fields and has named the sons Jack and Gene.

Herbert J. Carr, director of the Rycade Oil Corporation and of the Anglo-Mexican Petroleum Company, has returned to his office in New York after being in Europe for six months in connection with the Anglo-Mexican business.

Ronald S. Mason, who has been with the Sinclair Oil & Gas Company land department for nine years, has recently joined the Sunray Oil Company, Tulsa, as head of the land department.

B. E. Houchin of the Marland Oil Refining plant at Ponca City, Okla., is the father of twin boys, born during the Dempsey-Tunney fight in Chicago, and has named the sons Jack and Gene.

G. G. Langan, Mid-Continent manager for Hill, Hubbell & Company, in charge of the company's Tulsa plant, has recently been made vice-president of the Hill, Hubbell & Company of Texas, marketing subsidiary in that State. R. D. Hardcastle is in charge of sales in Texas, with headquarters at 1424 Neils Esperson building, Houston.

B. H. Barnes of California has recently been appointed district manager for the Regan Sales Company in the Mid-Continent, with headquarters at Houston. He was formerly connected with the Regan Sales Company of San Pedro, California.

J. C. Rubel of Bartlesville has resigned as general superintendent of production for the Ryan Petroleum Corporation. He plans to go into the oil business for himself after an extended vacation. He has been connected with the different concerns of A. D. Morton for more than 20 years.

George N. Russell, formerly with Joseph Greenspons Sons, has joined the Maloney Sales Corporation as city salesman in Tulsa, according to announcement of W. H. Elliott of the Maloney Sales.

Gillette Hill of the Philmack Company land department, Tulsa, spent last week in North Texas on business.

William Cross, under whom the exploration of the Kaw agency lands for oil was inaugurated, has been transferred to the Pottawatomie tribe, with headquarters in Topeka, Kansas. He has been succeeded by James L. Howson, who will be the Kaw agent at Washungah, in the western Osage.

R. H. Hubbell, of Hill, Hubbell & Company, San Francisco, is spending some time in the Gulf Coast region with headquarters with the company's office at Houston. He was in Tulsa for the exposition and after that spent some time studying pipe line conditions in the Mid-Continent.

Thos. Kinney, superintendent of the pipe line department for the Continental Oil Company, and formerly associated with the Illinois Pipe Line Company as superintendent in the Rocky Mountain region, paid the Casper headquarters a visit last week.

Old Timers Invited to Ranger Homecoming

Ranger, Texas.—If any of the old-timers who knew Ranger in its boom days are fortunate enough to get back for the Ranger Homecoming Oil Jubilee to be held October 21 and 22, they will find the caterpillar changed into the butterfly, so to speak. For Ranger is leaving no stones unturned to assure an enjoyable celebration.

Numerous amusements have been planned to fill both days. Among the important events is to be an invitation dinner to noted oil men and other out-of-town guests.

Ranger is now a thriving, modern town with all the conveniences of a city, and its citizens are cooperating to make the Jubilee a memorable occasion.

Plan Plugging Wild Gas Well in Grayson County

Wichita Falls.—The 12 million foot gasser that has been blowing wild in Grayson County, near Pottsboro, 14 miles northwest of Sherman, showed signs of bridging early in the week. Boilers had been moved from near the rig and were being fired up preparatory to begin pumping mud into the well. If the well can be successfully plugged, it is probable that a second test will be drilled quite near, since hopes of successfully completing the gasser have practically been given up.

The flow of gas was estimated at about 12 million cubic feet, from broken formation between 850 and 1200 feet.

The Simpson-Fell Oil Company, of Ardmore, Oklahoma, controls the acreage on which the well, O. W. Wall 1, is located, and drilled the test.

The well first blew in Wednesday, October 5, with an estimated flow of between six and eight million feet. The hole was plugged back to 850 feet and cemented. Afterwards the plug was drilled and the hole washed down to 1253 feet. The well then blew in when partly bailed down. A heavy volume of salt water is coming with the gas.

Total depth of the hole is 2515 feet. Drilling on the test started in June.

Leases Near Delano

Delano, Calif.—Several large parcels of land have been leased in this immediate vicinity during the past few weeks by large oil companies already holding extensive acreage in the district. The North American Oil Consolidated recently obtained for $10,000 an option on several hundred acres of land east of Delano. The option calls for the final payment of $65,000 one year from the date of the agreement. The lease carries a royalty in favor of the lessor of five and 12½ per cent, depending upon the size of the wells developed. A royalty of five per cent will be paid on wells producing less than 100 barrels, while those producing more than 100 barrels will carry a royalty of 12½ per cent. The land is located in several sections of township 25 and range 26.

Show Near Edison

Bakersfield, Calif.—A very promising sand has been found in the General Petroleum Corporation's Kerwin 1 well, near Edison, at 2626 feet. The formation showed a good quantity of oil and temporarily reverses the opinion that production is next to impossible under 3800 feet in that particular spot of the San Joaquin valley. Early drilling in the well disclosed heavy alluvial deposits, indicating that production would be found very deep, if at all. The test is a rank wildcat, being several miles from the nearest production. Slight showings of gas were found at shallow depths, but they were considered rather unimportant.

HOW OIL MEN PLAY

Garland Uses Plane for Business and Has More Time for Pleasure

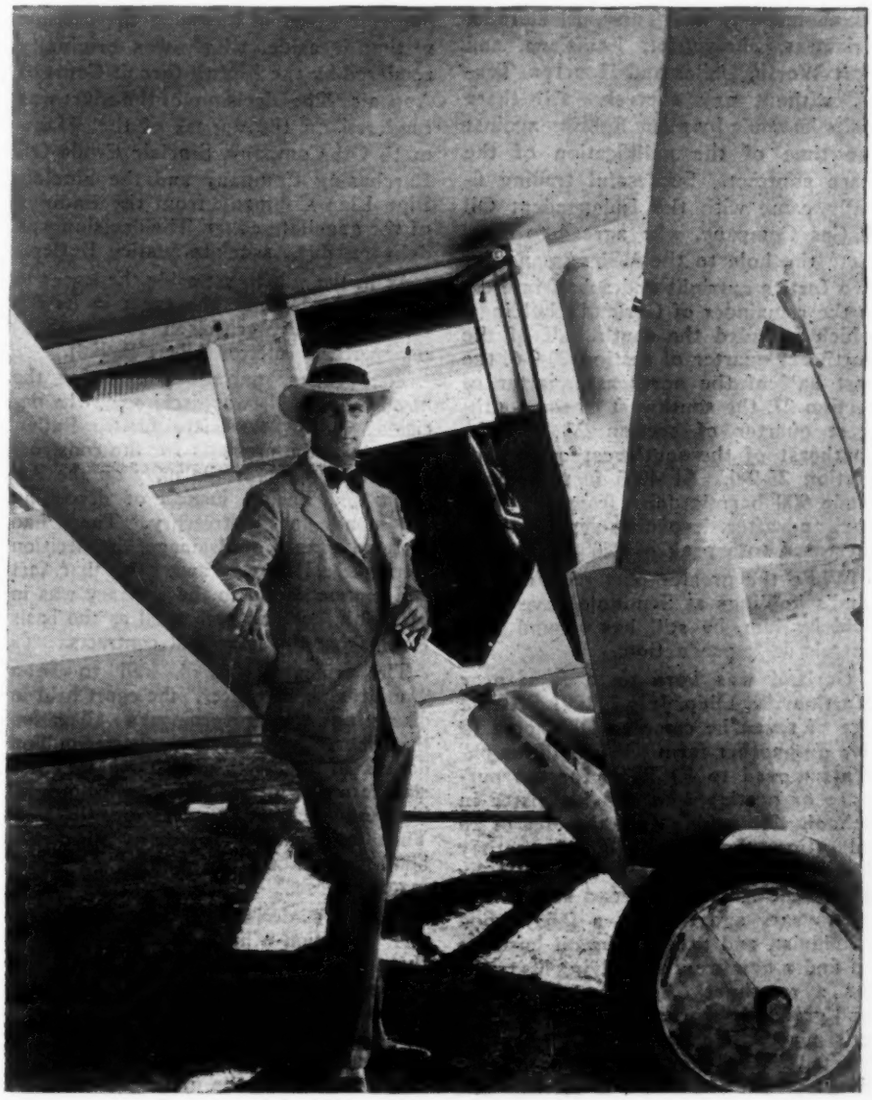
ROBERT F. GARLAND, 18 months ago just one of the many illustrious wildcatters of the Mid-Continent territory, but who today probably ranks at the top in prominence gained through successful service, is no doubt in that position as a progressive individual oil operator.

Bob Garland's business itinerary for a single week commonly involves visits to 10 cities located in as many states, and he has yet to worry over covering the program. He travels exclusively by aeroplane where there are suitable landing spots, using an automobile only as a means of transportation from air ports into town and vice versa. He owns his own ship, a Ryan five-passenger monoplane the exact duplicate of Colonel Charles Lindbergh's "Spirit of St. Louis," except that he has not cut his passenger accommodations for extra gasoline storage. He maintains his own private pilot although he is rapidly learning the art of flying himself, having several hours already to his credit.

Here's an example of Garland's business routine: The accompanying photograph was snapped at McIntyre Air Port, Tulsa, as he was preparing to hop at 10:45 a. m., October 4, for Oklahoma City, where he had an appointment at 12:15. He was due in Tulsa again the following day at noon and in Denver at 6:00 p. m. a day later.

"I didn't buy this plane for the fun I expected to get out of it," Mr. Garland explains. "I got it because I had proven this means of transportation economically sane by flying on business trips in a pinch, to meet pressing engagements. He admits it's nice to play around in as well though, and is leaving in the near future for a moose hunt in New Brunswick, Canada, accompanied by several friends. He doesn't know just how far into that territory they can find an air port, not yet having completed plans for the most desirable itinerary.

As an instance of where the monoplane comes in handy, Mr. Garland was on business in San Diego, California, two days before he was due at the International Petroleum Exposition. Cleaning up matters there, he flew with his pilot to El Paso, Texas, in six hours and 30 minutes, clipping 10 minutes from the former record. The next morning they proceeded to Waco, Texas, picked up the pilot's wife, and came into Oklahoma. They stopped at Muskogee for oil and made the last leg of the flight into Tulsa in 21 minutes, a distance of 64 miles by road and slightly more than two-thirds that by air. The entire trip was covered in 15 hours and 30 minutes from San Diego to Tulsa. His average time from Tulsa to Denver is around six hours.



ROBERT F. GARLAND, DISCOVERER OF SEMINOLE, TRAVELS EXCLUSIVELY BY AEROPLANE, AND IS GOING MOOSE HUNTING IN CANADA IN HIS RYAN THIS FALL.

Bob Garland is credited with pioneering the way to the world's greatest oil field—Seminole. When the Tolof Fixico 1 emerged from the rank wildcat class in July, 1926, to the world's greatest pool opener, the public couldn't decide whether to call it luck or fortune for the discoverer. The facts of the case reveal it to be the successful end of a long-drawn-out period of tough trudging. Garland had spent six years consistently working in the Seminole vicinity, drilling wells, studying logs and geological reports of various companies, selling leases and dabbling around in general in the neighborhood of Wewoka, Seminole and Holdenville. Prior to the successful completion of the Tolof Fixico 1 he drilled 38 dry holes with no inkling of success.

His first entry into Seminole area acreage personally came early in 1926, when he contracted with the Tidal-Osage interests to drill a hole to 4000 feet for a half of this company's 480-acre block near Seminole City. This land was held by a short term lease, and was good only for six months more except for a producer. The terms of the contract stated the well had to be spudded within 30 days, and before that time it was pounding away toward supposedly nothing but dust or salt water, in the minds of outside operators. At 4013 feet the hole was dry, and Garland had fulfilled his contract so far as the acreage was concerned,

but he wasn't satisfied, and still says he "could have sworn oil in paying quantities was just a little below the bottom of the dry hole." He had spent too much already for his own financial good, and so set out to seek subsidy from other companies. Within 10 days time he called for help in Oklahoma City and Tulsa, El Dorado, Arkansas, Shreveport, Louisiana, and Fort Worth, Dallas and Houston, Texas, without any success. All these visits he made by plane fighting against the time of the nullification of the lease contract. Successful trading finally came with the Independent Oil & Gas Company, who agreed to complete the hole to the Wilcox sand for two forties outright and a half interest in the remainder of Garland's holdings, which included the south half of the northeast quarter of section 26-9-6, the east half of the northeast quarter of section 27, the southwest of the southwest quarter of section 23 and the southeast of the southwest quarter of section 25-9-6. At 4065 feet the well made 900 barrels daily from the Wilcox, and after deepening several times increased to a peak of 9200 barrels.

While the greater part of Mr. Garland's holdings at Seminole have been sold by him, he still has around 1000 barrels daily production.

Garland was born on a farm near Martinsville, Ohio, July 7, 1891. At the age of seven he came to Oklahoma to live on another farm. When 16 his parents moved to El Reno for the purpose of putting him and his sister in school. He couldn't see the idea of an education, though and quit to satisfy his desire to become a machinist by starting work in a railroad shop. Sixteen years ago he was a fairly good machinist, and entered the oil business to find a new way of applying his trade. As a roughneck he showed promise and gradually worked to the tool pusher's place. He has drilled and contracted more than 250 wells. Later development of interest in geology and lease blocking carried him into the Seminole area.

Garland's interest in aeroplanes did not come after his great success. He has been tampering around with planes for several years, interested in the mechanic's side.

Aviation has the greatest future of any other big industry known at present, in his opinion. "Every aeroplane factory in the world is overcrowded with orders right now," he says, "and the time is not far hence when planes will be in common use in a commercial way.

"And as for play, well they're mighty fine to get away from work in a hurry."

C. Rolfe McCullom of the Union Oil Company at Los Angeles, was in Houston this week. He spent about a week in Oklahoma and Texas on this trip.

Supreme Court Ends Teapot Dome Litigation With Decision Against Sinclair

Washington, D. C.—Harry F. Sinclair's lease to the Teapot Dome Oil Reserve was acquired by fraud and corruption, it was held October 10 by the United States Supreme Court in affirming the decision setting it aside, which was originally rendered by the Eighth Circuit Court of Appeals. The decision of the court was rendered on the appeal of the Mammoth Oil Company, Sinclair Crude Oil Purchasing Company and the Sinclair Pipe Line Company from the findings of the appellate court. The decision was delivered by Associate Justice Butler.

As in the suit to set aside the leases to Edward L. Doheny, the court in its decision severely criticised former Secretary of the Interior Albert B. Fall.

The primary purpose for leasing the naval reserves, it was declared in the decision read by Associate Justice Butler, was to use the proceeds for the construction of storage for the navy on the Atlantic and Pacific, instead of depositing the money in the treasury. There had been no danger of drainage, the decision continued; Fall was aware of that fact and representation to the contrary was in bad faith, but had been used as the basis for making the lease and contracts.

The evidence showed Fall to be a "faithless public officer," the court held in discussing the government's allegation that he received nearly a quarter-million dollars in Liberty Bonds from the Sinclair interests in connection with the leasing, and the company organized in New York to purchase oil, out of which the bond transaction arose, was for no "legitimate purpose."

Monday's decision brings to a close civil litigation which has continued for three years, growing out of the senate investigation of oil leases made by Fall as Secretary of the Interior. The government attacked the lease as invalid, not only on the ground of fraud and corruption, but also on the ground that it was not authorized by law. The federal district court at Cheyenne, Wyoming, upheld the lease against both charges, but the appellate court, while sustaining the lower court's contention that there was authority in law for its making, cancelled it on the ground that fraud and corruption ran through the whole transaction between Sinclair and Fall.

Sinclair then appealed to the United States Supreme Court, which affirmed the decision restoring the reserve to the government.

"From the beginning," the court commented in a lengthy decision, "Fall was keen to control the leasing of the naval Petroleum Reserves." Commenting on a letter from Fall to Doheny declaring that there would be no further conflict with navy officials, as Fall would handle the reserves without calling upon the Secretary of the Navy in consultation, the decision declared: "This exultant declaration that he was in a position to handle these vast properties as he pleased discredits Fall. His desire to get control of the reserves and then so proclaim that he had it strongly suggests that he was willing to conspire against the public interest. And that inference is confirmed by his subsequent conduct."

Creation of the Continental Company, the purchase and resale contracts enabling it to make more than eight million dollars with out capital risk or effort, the assignment of the contract to the resale purchasers for a small fraction of its probable value, and the purpose to conceal the disposition of its assets, "makes it plain," the court said, "that the company was created for some illigitimate purpose. And the clandestine and unexplained acquisition of these bonds by Fall confirms the belief, generated by other circumstances in the case, that he was a faithless officer."

"The tanks, pipe lines and other improvements put upon the reserve for the purpose of taking away its products, were not authorized by congress," the court concluded. "The lease and supplemental agreement were fraudulently made to circumvent the law and to defeat public policy. No equity arises in favor of the lessee or the other petitioners to prevent or condition the granting of the relief directed by the Circuit Court of Appeals. Petitioners are bound to restore title and possession of the reserve to the United States and must abide the judgment of congress as to the use or removal of the improvements or other relief claimed by them."

It was pointed out in the decision that the complaint did not allege bribery and that there was no occasion to consider whether Fall was bribed in respect to the lease or agreement, and that point is not determined by the court.

While this decision disposes of the civil litigation, Sinclair is yet to be tried, together with Albert B. Fall, on charges of conspiracy to defraud the government in connection with the lease. This case will come up in Washington for trial October 17, after several delays granted at the request of the government in an effort to secure the evidence of material witnesses now in Europe. Edward L. Doheny and Fall were found not guilty by a jury here last year, on similar charges.

Test Adobe Canyon

Bakersfield, Calif.—The Adobe Canyon district, lying east of the Poso Creek field, will be tested immediately by both the Superior Oil Company and California Petroleum Corporation. The Superior's well will be located on section 13-27-28, while the California Petroleum has selected section 25-27-28 for its first test. The supposed structure lies in the same general district as Round Mountain, Kern Front and Mt. Poso, but is not connected with either.

Summary of Information on Handling Congealing Oils and Paraffins

Paper to be presented before Mid-Year Meeting of the Petroleum Division A. I. M. E., Fort Worth, October 19, 1927

By C. E. REISTLE, JR.*
U. S. Bureau of Mines, Laramie, Wyoming

All crude oils become more viscous when chilled, but the only oils that congeal and precipitate paraffin to such an extent as actually to cause production troubles are those that contain an appreciable amount of wax.

In handling these oils of high wax content, three distinct problems may be encountered before the oil reaches the refinery. The first problem is the precipitation and accumulation of paraffin in the well, either in the oil string or on the face and in the pores of the sand. The second problem is the accumulation of paraffin and the congealing of oil in the transportation lines. The third problem is the precipitation of paraffin and the formation of tank bottoms.

Discussion of this paper is invited. It should preferably be presented in person at the Fort Worth Meeting, October, 1927, when an abstract of the paper will be read. If this is impossible, discussion in writing may be sent to the Editor, American Institute of Mining and Metallurgical Engineers, 29 West 30th Street, New York, N. Y., for presentation by the Secretary or other representative of the author. Unless special arrangement is made, the discussion of this paper will close December 1, 1927. Any discussion offered thereafter should preferably be in the form of a new paper.

Factors That Control the Solubility of Paraffin in Crude Oil

Two main factors, possibly three, govern the solubility of wax in crude oil. The first of these is temperature. The solubility of wax in crude oil increases with an increase in temperature, and as the temperature approaches the melting point, the wax becomes soluble in all proportions in the crude oil. The higher the melting point of a wax, the less soluble it is in crude oil below its melting point. All crude oils containing wax can be chilled to a point where the oil is saturated with wax. If the temperature is decreased below this point, some of the wax will crystallize from solution. Fig. 1 shows the effect of temperature on the solubility of crude paraffin in oil.

The second factor is the amount of volatile constituents and gas removed from the crude oil. Evaporation of the volatile constituents and gas lessens the volume of the oil and concentrates the solution of wax in the oil; therefore less wax can be held in solution at a definite temperature. As the natural amount of wax present in the oil is constant, this results in the oil becoming saturated with wax at a higher temperature than if the volatile constituents and gas were still in the oil. As an example of this, a fresh sample of crude oil having a gravity of 39.8 degrees A. P. I. was saturated with wax at 72 degrees Fahrenheit. The temperature was held constant and the oil evaporated until it had a gravity of 37 degrees A. P. I. Approximately 1 per cent by weight of wax was precipitated from solution.

The possible third factor is the presence of water. Water is slightly soluble in crude oil; and it is probable that oil containing water is a poorer solvent for wax than dry crude oil, just dry alcohol or acteone. The exact effect of water on the solubility of wax in crude oil has never been determined. The writer is working on this particular phase of the problem at the present time.

as alcohol or acteone that contains water is a poorer solvent for wax than

When crude oils that contain wax are chilled or evaporated sufficiently, some of the wax will be precipitated or crystallized from the solution. The size of the crystals depends only to a silght extent on the rate of cooling. This is negligible, therefore, as even with slow cooling or exaporation the crystals remain small. If the crude oil is not agitated while this crystallization takes place, the crystals interlock and form a network which prevents movement and supports or hold the liquid constituents of the oil. If the oil is agitated during the crystallization, the oil remains liquid, although its viscosity is greatly increased by the presence of solid or semi-solid wax crystals. This is similar to results obtained by adding fine colloidal clay to water; if sufficient clay is added the resulting mass will become viscous. If the temperature is lowered sufficiently, the oil will congeal, even though agitation is continued. This is due to the large number of wax crystals present and also to the fact that the liquid constituents become so viscous that internal friction prevents any free movement of the oil around the wax.

These small wax crystals have a tendency to accumulate into small granular particles, each particle being composed of a number of the wax crystals. This is found especially in storage tanks where the oil stands over a long period of time. The formation of granular particles will usually take place more rapidly when the oil is cooled only slightly below the point of saturation, as the wax crystals then have more freedom to move and settle out of the oil. When the oil is cooled until it has congealed, the wax crystals cannot move to form these granular particles. If congealed oil is agitated, the crystals come into contact with one another and often form these larger particles.

Waxes will remain in solution in crude oil and will form supersaturated solutions, even though the oil has been chilled to a point below where it is saturated with wax, but the wax will

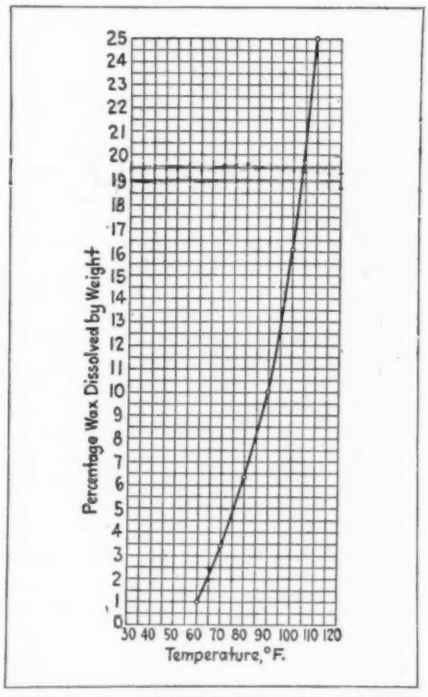


FIGURE 1.—SOLUBILITY OF CRUDE PARAFFIN WAX IN CRUDE OIL OF 36.2° A. P. I. FROM THE PANHANDLE FIELD, TEXAS.

*Presented by permission of the Director of the Bureau of Mines. Copyright, 1927, by the American Institute of Mining and Metallurgical Engineers, Inc.

Table 1.—Melting Points of Crude Paraffins

Field	Sand	Melting Point Degrees Fahrenheit
Salt Creek, Wyo.	2nd Wall Creek	165.4
Lance Creek, Wyo.	Dakota	181.0
Panhandle, Texas	Granite Wash	141.2
Marietta, Ohio	Macksburg Stray	135.2
Clay District, W. Va.	Big Indian	161.9
Bradford, Pa.	3rd Sand	132.1

slowly crystallize from solution until equilibrium is established and the oil is saturated with wax at that respective temperature.

If crude oil that contains a large amount of wax is heated to a temperature above the highest melting point of the wax, another set of conditions is created. The wax then becomes a liquid dissolved in a liquid, each liquid being soluble in the other; instead of a solid dissolved in a liquid, the liquid being insoluble to any great extent in the solid. This latter case is where the wax has been dissolved in the oil at a temperature below its melting point.

If, after heating the oil to a temperature above the metling point of the wax, the oil is again cooled below the temperature at which it is saturated with wax, no crystals form. This is probably due to the fact that the wax has formed a solution of the oil in wax, and this solution of oil in wax is soluble in the oil below the temperature at which the wax would ordinarily separate out of solution if it were present as a solution of *wax in oil* instead of *oil in wax*. If the temperature is maintained below the melting point of the wax and also below that point where it is completely soluble as wax in oil, the solution of oil in wax will slowly change over to wax dissolved in oil; and as this continues there becomes an excess of wax dissolved in the oil, and some wax crystallixes out. This is the writer's explanation for the results obtained by heating high cold-test oils such as the Panhandle crude, and thereby reducing the cold test from a number of hours to several days. After standing for several days these crude oils regain their original cold test; this occurs when the oil dissolved in wax has been reconverted to wax dissolved in oil.

Character of Paraffin Deposited in the Well or on the Face and in the Pores of the Sand

The paraffin that is deposited in producing wells varies in consistency from a soft, granular semi-fluid, containing considerable oil, to a hard semi-solid wax, containing only a small quantity of oil. Usually some sand, water and inorganic silt is also present. The character of the paraffin depends primarily on the amount of oil present with the wax. This in turn is usually governed by the length of time the wax has been allowed to accumulate in the well. On standing in the well, the oil slowly drains and works out of the wax deposit, leaving it in a more compact and drier state.

The character of the paraffine is affected also by the amount of cooling and evaporation to which the oil is subjected in the well. If there is only sufficient cooling and evaporation to cause the precipitation of a small amount of wax, the melting point will be high, as waxes with the highest melting points will be the first to crystallize from the solution. If a greater cooling and evaporation takes place, a greater quantity of wax will separate from solution, but the melting point will be slightly lower because waxes of low melting point crystallize from solution, in addition to those of higher melting points. The melting points of paraffin removed from wells in different fields are given in Table 1.

These crude waxes consist of a numbera of fractions having different melting points. Usually the wax with the lowest melting point melts at about 135 degrees Fahrenheit, and fractions regularly increase the melting point to as high as 191 degrees Fahrenheit. In the Panhandle, wax fractions with the lowest melting point found melted at 141 degrees Fahrenheit, while those with the highest found melted at 172 degrees Fahrenheit. In Lance Creek waxes melting at from 135 degrees Fahrenheit to 191 degrees Fahrenheit were found.

Deposition of Paraffin in Flowing Wells

The accumulation of paraffin in the oil string of flowing wells forms constrictions in the pipe and retards the flow of oil. If the paraffin is not removed it will gradually fill the pipe and kill the well. As the quantity of paraffin increases, the production of the well gradually declines; it is essential, therefore, to remove or prevent it in order to obtain the maximum amount of oil available.

The paraffin deposits in flowing wells usually extend from the top of the well to a depth of several hundred feet. As a general rule, this lower limit of paraffin accumulation corresponds roughly with the depth at which the earth temperature is the same as the temperature at which the oil is saturated with paraffin, or to the fluid level in wells where the oil rises above this point. Where a large amount of gas is produced, and where excessive cooling takes place, the paraffin often extends somewhat deeper than this.

In new fields, the oil leaves the sand at a temperature above that at which it is saturated with paraffin. However, as the oil is expelled from the well, it is cooled by the gas that is doing work in lifting the oil, by radiation of heat to the surroundng formatons, and also because some of the lighter constituents are evaporated by the gas, which also produces cooling. In many cases, this results in the crystallization of wax from solution in the oil. However, the presence of free paraffin in suspension in the oil is not sufficient to cause any great amount of paraffin to accumulate in the well. It is essential, in addition to this, to have a set of conditions whereby these suspended particles of wax have an opportunity to settle out of the oil and become attached to the walls of the oil string; otherwise, they will be carried out of the well by the oil.

The most favorable condition for the accumulation of paraffin takes place between flows. During this period the oil drains back into the well, leaving a thin film of oil and suspended wax on the sides of the pipe; the oil drains away from these particles of wax, and they become firmly attached to the pipe. Additional paraffin may be precipitated from the oil film if the walls of the pipe are below the saturation temperature of the oil, especially if there is much gas being produced between flows, as this will have a tendency to remove an additional amount of the lighter constituents and raise the temperature at which the oil is saturated with wax. When the temperature of the surrounding strata is above that at which the oil is saturated with wax the film of oil has a tendency to redissolve any suspended paraffin, and therefore very little accumulates. Sometimes when large quantities of gas are being produced during the period between flows, the film of oil may be evaporated to such an extent that it becomes saturated with wax at a much higher temperature than the bulk of the oil; in such cases the paraffin deposit will often extend below the point where the temperature of the surrounding strata is the same as that at which the main body of oil is saturated.

The amount of paraffin that accumulates in the well is governed to a large

Table 2.—Temperature Data on Flowing Wells at Salt Creek

Well	Size of Oil String	Approx. Temp. of Sand Deg. F.	Temp. of Oil at Casinghead, Deg. F	Daily Prod. Barrels	Cu. Ft. of Gas per Bbl. of Oil
8A NW¼ 13-40-79	2-in. Tubing and Packer	108	56	40	7789
16A SW¼ 13-40-79	2-in. Tubing and Packer	108	66	243	2848
31A SW¼ 30-40-79	2-in. Tubing and Packer	108	81	575	1089

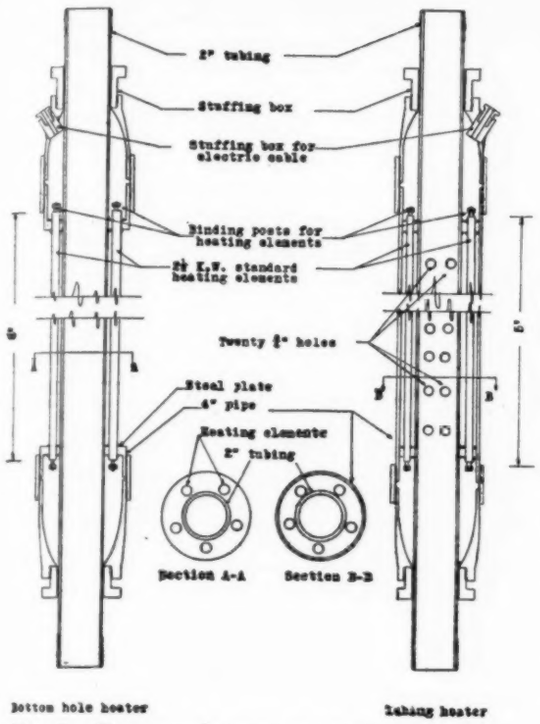


FIG. 2.—ELECTRIC HEATERS FOR USE IN OIL WELLS.

extent by the length of time elapsing between flows and the efficiency with which the oil is lifted. In wells having oil strings of the same size, there is usually a more pronounced cooling in the smaller wells, on account of the inefficient lifting of the oil and a better radiation of heat to the surrounding strata. During the periods when oil and gas are accumulating, there is a constant lifting and dropping of the oil in the well. This work on the oil by the gas lowers its temperature and also removes some of the lighter constituents. As a result of these conditions, the oil in smaller wells usually contains a larger amount of suspended paraffin. Table 2 gives an example of this cooling.

In addition to greater cooling, and therefore more suspended paraffin present in the oil, there is also a better opportunity for the suspended paraffin to become attached to the walls of the pipe in these wells. The longer periods between flows allow the oil to drain more completely from the pipe in the upper part of the well; and the suspended paraffin becomes more firmly attached to the pipe, so that less of it is removed by the oil when it flows from the well. In the wells under observation at Salt Creek, there was very little paraffin trouble in the large flowing wells, but as the production declined the paraffin troubles became more pronounced. If the oil string was then made smaller so that the period between flows was shortened, the paraffin trouble decreased; but as production continued to decline, the rate of paraffin accumulation again increased. When the wells were put on the pump the accumulation of paraffin was practically eliminated, providing the proper precautions were observed. This will be discussed later.

In wells where excessive cooling takes place, or where from other causes a large amount of suspended wax is present in the oil, a certain amount of paraffin will accumulate and become attached to the walls of the pipe even though the periods between flows are short. It is possible, also, that some of paraffin particles become attached to the pipe as they come into contact with it while flowing the oil from the well.

In wells that are flowed artificially by compressed gas or air, the same conditions are responsible for the deposition of paraffin, and the same methods of preventing and removing the accumulated paraffin are applicable.

In wells that are produced by means of the gas-lift or air-lift trouble is often encountereed with paraffin deposited at the foot piece or lower end of the eduction tube; and in wells where gas is jetted into the eduction tube at various points, paraffin accumulates at these places. Paraffin also accumulates along the walls of the pipe in the same manner, and as a result of the same conditions, as in natural flowing wells.

In wells that are produced by means of the gas-lift or air-lift trouble is often encountered with paraffin deposited at the foot piece or lower end of the eduction tube; and in wells where gas is jetted into the eduction tube at various points, paraffin accumulates at these places. Paraffin also accumulates along the walls of the pipe in the same manner, and as a result of the same conditions, as in natural flowing wells.

The accumulation of paraffin around the foot piece or end of the eduction tube is usually due to using excessive quantities of gas and allowing the well to pump off. When the well pumps off, the gas flows through the eduction tube and results in a local cooling. There is often sufficient cooling and evaporation at this point to cause the deposiion of paraffin, even when the well is correctly operated. It also dries the film of oil on the pipe and allows the suspended paraffin to become firmly attached. The accumulation of paraffin around the jets in the eduction tube is the result of cooling caused by the gas at this point, and of the fact that the constant wetting and drying of the surface immediately surrounding these jets allows particles of paraffin to become firmly attached to the pipe.

Methods of Preventing and Removing Paraffin From Flowing Wells

In most instances, from an economic standpoint, it is advisable to prevent the accumulation of paraffin. Sometimes, however, this is either impossible or so costly that it is preferable to remove the paraffin after it has accumulated.

In order to prevent or decrease the deposition of paraffin in flowing wells, it is necessary to produce the oil so that the conditions which favor paraffin deposition, and which have just been discussed, are eliminated or modified. Generally, these conditions can be modified by reducing the size of the oil string. This shortens the periods between flows, causes the oil to be lifted more efficiently, and therefore results in less cooling. It also often results in reducing the gas to oil ratio, and thereby reduces evaporation of the lighter constituents. When tubing is used,

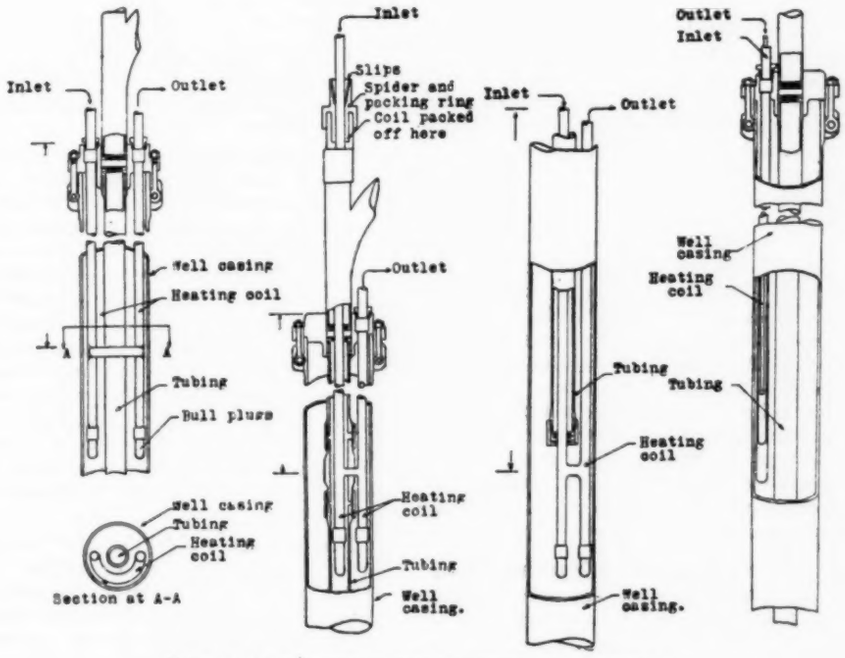


FIG. 3.—COILS FOR STEAM-HEATING IN OIL WELLS.

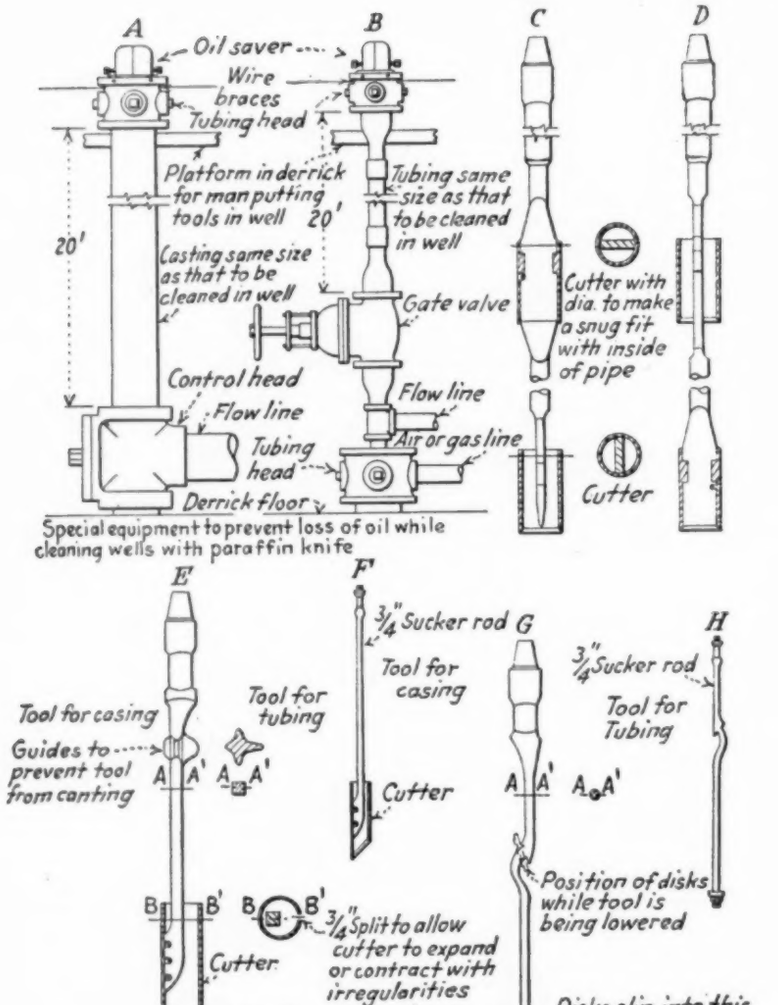

A
B
C
D
Oil saver
Wire braces
Tubing head
Platform in derrick for man putting tools in well
20'
20'
Tubing same size as that to be cleaned in well
Casing same size as that to be cleaned in well
Gate valve
Cutter with dia. to make a snug fit with inside of pipe
Control head
Flow line
Flow line
Tubing head
Air or gas line
Derrick floor
Cutter
Special equipment to prevent loss of oil while cleaning wells with paraffin knife
E
F
G
H
Tool for casing
Tool for tubing
Guides to prevent tool from canting
3/4" Sucker rod
Tool for casing
Cutter
3/4" Sucker rod
Tool for Tubing
Position of disks while tool is being lowered
Cutter
3/4" Split to allow cutter to expand or contract with irregularities in the pipe
Outside dia. of cutter to be same as inside dia. of pipe to be cleaned
Heavy flexible disk same dia. as pipe to be cleaned
Disks slip into this position when tool is pulled from well
Iron disk
Paraffin Knife
Paraffin Hook

FIG. 4.—TOOLS FOR REMOVING PARAFFIN FROM OIL WELLS.

there is also less heat lost to the surrounding strata by radiation, as the space between the tubing and casing acts as insulating medium. The use of back-pressure, although not always applicable or advisable, will sometimes prevent the conditions that favor the deposition of paraffin.

Circumstances often make it impossible to prevent the accumulation of paraffin by proper production methods alone. One of the most satisfactory methods to use with such conditions is to heat the oil as it flows from the well. A number of different methods of heating have been tried, and many have been found satisfactory. It is questionable, however, whether the cost of operating these methods will compare favorably with methods for removing the paraffin after it has accumulated.

Electric Heaters for Flowing Wells

One of the most common methods of heating the oil as it flows from the well is by the use of electric heaters. These heaters are of the resistance type and are usually designed to run into the well on a wire line or so that they may be attached to the bottom of the oil string. A number of types have been patented. Two types of heaters are shown in Fig. 2.

These electric heaters must generate sufficient heat so that the oil will reach the top of the well at a temperature above that at which it is saturated with wax. As a general rule, it is necessary to operate them continuously in order to prevent the deposition of paraffin. If the heaters have capacity enough to heat the oil sufficiently to dissolve additional paraffin, they can be operated intermittently. When used in this manner, a certain amount of paraffin is allowed to accumulate in the well, then the heaters are turned on, and the heated oil dissolves this accumulated paraffin.

The greatest objection to electric heaters is the cost of operation and maintenance. It is very difficult to build a heater that will operate satisfactorily over a long period of time under the severe conditions existing in a well. It is difficult, also, to obtain cables for transmitting the power to the heaters. As an example of the cost of operating electric heaters, the following results are given: An electric heater was placed on the tubing of a 100-barrel well just below the point where the paraffin started to accumulate. The oil normally reaches the top of the well at a temperature of 71 degrees Fahrenheit, and with the use of the heater the temperature was raised to 83 degrees Fahrenheit. This was found sufficient to prevent the deposition of paraffin. The heater had a capacity of 10 kilowat hours, and estimating the cost of the power at 1¼c. per kilowat hour, the cost of operating the heater was 12½c, per hour—$3 per day, or $90 per month. This represents only the cost of operating the heater, and does not take into consideration other costs, such as maintenance, etc. The same well could be kept in excellent condition by the use of a paraffin knife or hoop once a week. The total cost of operating these tools with a portable winch would not exceed $10 per time, or $40 per month.

Heating By Steam, Water, Oil or Gas

In some fields, steam is used to heat the oil while it is flowing from the well. The steam is usually put into the well through a coil, either inside of the oil string or between the oil string and the casing. Generally, the coil is connected so that it returns the condensed water to the surface instead of allowing it to run into the well and be produced with the oil. The depth to which closed coils can be operated in the well is limited by the amount of pressure available to lift the condensed water. In very deep wells, especially where the oil does not have a tendency to emulsify badly, the coils are left open, and the condensed water is allowed to drop to the bottom of the well and be produced with the oil. Several types of coils are shown in Fig. 3. These coils were described to the writer by K. C. Sclater, who used them in the South Mountain field in California.

In using steam, it is possible to raise the temperature of oil sufficiently so that it will dissolve additional paraffin. It is, therefore, customary to operate the steam coils at intervals instead of continuously.

It is questionable whether this method would be satisfactory from the cost viewpoint, unless excess steam is available without appreciable extra expense; for instance, where steam is used for pumping and where fuel gas has a very low market value. Unless this is true, it will usually prove cheaper to use the paraffin knife or hook and a portable winch.

At some wells, hot water or oil is circulated instead of steam. The same types of coils are used, and the liquid is circulated from the heater into the well and back to the heater by means of a pump. It is difficult to raise the temperature of the oil in the well very much by this method, and the cost of operation will usually be large.

In wells that are pumped by means

of the air-lift or gas-lift, the ingoing gas is often heated, either by a steam heater or a gas-fired heater. It is doubtful whether sufficient heat to prevent entirely the deposition of paraffin can be transferred to the well in this manner. In most instances, where this method has been tried, it has been abandoned as unsatisfactory.

Special Tools for Removing Paraffin

Usually, it is cheaper, with flowing wells, to allow the paraffin to accumulate to a certain extent and then remove it by using special tools. These tools are of two general types: those that cut the paraffin from the tubing and allow the flowing oil to carry it from the well, and those that cut the paraffin from the pipe and also remove it from the well. Several types of these special tools are shown in Fig. 4. The paraffin knife and flow devil can be used without interfering with the production. These tools cut the paraffin free from the pipe, and it is flushed from the well by the oil. The special head shown in Fig. 4 allows these tools to be run in and out of the well without a loss of oil. In wells where the amount of paraffin is large, it is usually advisable to use the paraffin hook. This tool cannot be used while the well is flowing, and it is necessary, therefore, to use it between flows or to shut the well in. The advantage of this tool is that it removes the paraffine from the well and prevents the possibility of bridging of the loosened paraffin, as often occurs when the paraffin knife or flow devil is used on large deposits. These tools can be operated either by the standard equipment at the well, or by portable electric and gasoline powered winches.

If these tools are used at regular intervals, the amount of paraffin that accumulates will not affect production. A more detailed discussion of these tools is given in the United States Bureau of Mines **Report of Investigations, Serial No. 2802.** The cost of removing paraffin in this manner should not exceed $10 per time, when using portable winches, and should be much less when the well is rigged up so that the tools can be operated by the engine at the well.

Deposition of Paraffin in Pumping Wells

The accumulation of paraffin in pumping wells gradually closes up the tubing and increases the load on the rods; and if it is not removed the load often becomes so great that the rods break under the increased strain. The presence of paraffin also makes it difficult to pull broken rods and it often becomes necessary to remove it from the tubing before the rods can be run back into the well.

The most pronounced trouble from paraffin occurs in pumping wells in which the oil flows by heads from the tubing instead of pumping steadily. When wells produce in this manner they are usually referred to as being agitated by the pump. This condition often occurs where there is a packer between the tubing and the casing, or where the casinghead is closed and any gas produced with the oil must come up the tubing. Crude oil has a tendency to remain supersaturated with gas and when agitated this gas comes out of solution. Agitation often occurs in pumping wells where the oil enters the bottom of tubing supersaturated with gas; as the oil approaches the top, the pressure gradually decreases, and the motion of the pump is sufficient to cause the liberation of this gas from solution. The liberated gas flows the oil above it out of the well. When agitation occurs and the oil is removed from the tubing in this manner, a thin film of oil and suspended paraffin remains on the walls of the pipe, and the paraffin becomse firmly attached in a manner similar to the way in which it accumulates in flowing wells during the periods between flows.

Table 3.—Temperature Data on Pumping Wells at Salt Creek

Well	Size of Oil String Tubing Inches	Approximate Temperature of Sand Degrees F.	Temperature of Oil at Casinghead Degrees F.	Daily Production Barrels
19A NE¼ 13-40-79	2	108	63	11
36A SE¼ 25-40-79	2	108	71	30
1A NE¼ 36-40-79	2	108	73	50
29A NE¼ 24-40-79	2	108	73	65
3A SE¼ 24-40-79	2	108	73	95
23A NE¼ 24-40-79	2	108	60	30

The movement of oil is slow in pumping wells, and the radiation of heat to the surrounding strata results in the oil being cooled appreciably. Table 3 gives the tubing-head temperature of some pumping wells at Salt Creek.

The well 23A was producing oil by heads instead of pumping steadily, and the low temperature was probably partly due to cooling from the gas as it expanded and flowed the oil.

Paraffin also accumulates rapidly when the valves leak in wells that are pumped intermittently. This condition allows the oil to drain out of the tubing during the periods when the well is not pumped, and the paraffin then becomes attached to the pipe.

Sufficient Oil Prevents Paraffin Deposition

There is little or no tendency for paraffin to accumulate and stick to the walls of the pipe so long as it is completely full of oil. Instead, the paraffin remains suspended in the oil and is carried out of the well with it. Even on long standing, the paraffin will not become firmly attached to the walls of a pipe that is full of oil. If the oil is drained or flowed from the pipe, the suspended paraffin that remains with the film of oil will become firmly attached as the oil drains away from it and will remain on the pipe when again covered with oil. When the oil contains a large amount of suspended paraffin, some of it will accumulate on the rods and tubing, even under the best of conditions. The rate of accumulation in this manner, however, is very slow; it seldom becomes hard or extensive enough to cause trouble, and will generally be taken care of by the regular pulling of the rods for other troubles.

As previously mentioned, the most severe trouble from paraffin is found in wells that flow or agitate instead of pumping steadily. This can be stopped by taking the gas that is produced with oil out at the casinghead and by using a good gas anchor remove all the excess gas that is held in the oil as a supersaturated solution. In most cases, this will result in the well pumping

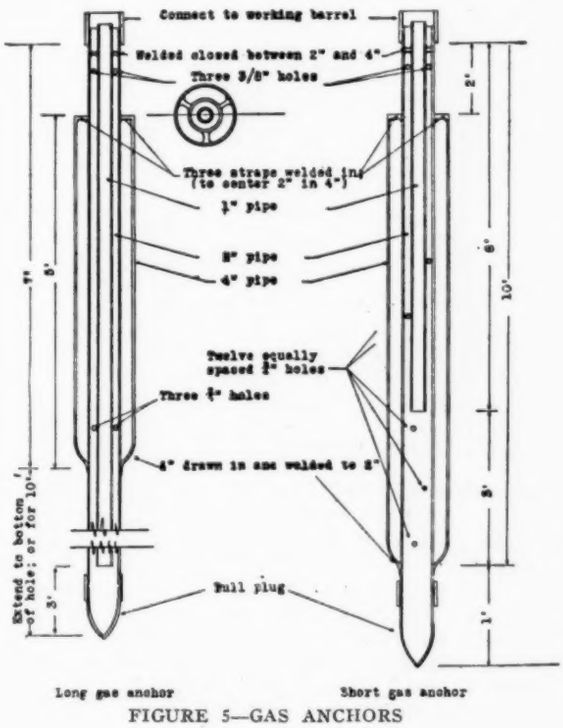

Connect to working barrel
Welded closed between 2" and 4"
Three 3/8" holes
Three straps welded in (to center 2" in 4")
1" pipe
2" pipe
4" pipe
Twelve equally spaced 2" holes
Three 4" holes
4" drawn in and welded to 2"
Pull plug
Extend to bottom of hole; or for 10'
Long gas anchor
Short gas anchor

FIGURE 5—GAS ANCHORS

steadily and will completely stop paraffin troubles. Two types of gas anchor are shown in Fig. 5. When the well still has a slight tendency to flow after these precautions have been observed, a back-pressure of 25 to 30 pounds per square inch held on the tubing will be effective. This back-pressure has no effect on the sand, as it is held against the pumping equipment only.

Removing Paraffin From Pumping Wells

A paraffin hook can be run into the tubing on the rods after they have been pulled and the working valve removed. It is only necessary to run the tool to the depth at which the paraffin showed on the rods. When the tool is pulled from the well, it will bring all the accumulated paraffin with it. This operation can be done with the usual portable winch used for pulling rods, or with the drilling engine if the well is rigged up.

Hot solvents, such as kerosene, crude oil or gasoline, can be run into the well through the casing and pumped out through the tubing. It is difficult, however, to heat the solvent sufficiently to dissolve the paraffin deposited in the tubing in this manner. The cost of this method is prohibitive in most cases, as the rods can be pulled and a paraffin hook used with less special equipment and expense.

When large quantities of casinghead or drip gasoline are available, they can often be used for dissolving the paraffin by putting several barrels into the well and then circulating the oil for several hours by connecting the tubing into the casing. The crude oil and gasoline will successfully remove the paraffin, providing they are circulated in this manner for several hours, in order to allow them time to dissolve it. This method is applicable only where the gasoline is available at a very low cost.

Certain chemicals for removing paraffin are on the market. Most of these react with water to generate heat—700 to 800 B. t. u. per pound. The chemical is usually run into the well between the tubing and casing and allowed to react at the bottom of the well. This heats the oil, which in turn dissolves the paraffin from the tubing as the oil is pumped through it. Unless a large quantity of chemical is used, the oil will not be heated sufficiently to dissolve the paraffin. It is cheaper to remove the paraffin from the tubing of pumping wells by pulling the rods and using a paraffin hook.

Deposition of Paraffin on the Face and in Pores of the Sand

The accumulation of paraffin on the face or in the pores of the sand decreases the amount of oil that can enter the well. This particular phase of the paraffin problem is one of the most serious, because it usually occurs in old wells of small production, in which it is often doubtful whether the increased production obtained by removing the paraffin will justify the expense incurred.

The temperature of most producing oil sands is above that at which the original oil is saturated with paraffin. And deposition of paraffin on the face or in the pores of the sand is therefore the result of evaporation and cooling of the oil as it flows through the sand or into the well. As a field is produced the remaining oil in the sand steadily becomes heavier, due to the loss of the lighter constituents. As an example of this, the initial boiling point of oil from the second sand at Salt Creek increased from 98 degrees to 103 degrees Fahrenheit in 1922, to 116 degrees Fahrenheit for 1924, and 142 degrees to 144 degrees Fahrenheit in 1926. It is also of interest to note that no vacuum has been used in this field during that time. It is possible, in fields where vacuum has been used for a long period of time, that a sufficient quantity of the lighter constituents have been removed so that the oil adjacent to the well is unable to hold all of the paraffin in solution, and it has crystallized out and caused the oil to congeal in the pores of the sand. It is also possible that in many fields the gas flowing through the upper part of the sand, after the oil has been partially depleted, has evaporated the remaining oil in this part of the sand until it has reached the point where paraffin has been precipitated and caused the oil to congeal and plug the pores of the sand.

In fields where the oil is unsaturated with paraffin at the temperature of the sand, there will not be any accumulation of paraffin, provided the fluid level is maintained at the top of the sand, as the temperature of the oil in the well will be very nearly the same as the temperature of the sand. Any gas being produced with the oil cannot cool it very much, because it does not do any appreciable amount of work on the oil at this point. In most cases, the gas does not expand suddenly upon entering the well, but gradually expands as it flows through the pores of the sand in approaching the well; therefore very little cooling can result from this source. In addition to these conditions, it is improbable that any wax would be deposited on the sand, providing the fluid level was constantly maintained at or above the top of sand, even providing the oil were cooled and evaporated so that it contained suspended paraffin. Laboratory tests have shown that paraffin will remain in suspension if there is sufficient oil.

The accumulation of paraffin on the face of the sand probably takes place in wells in which the fluid level is maintained at the bottom of the sand. In flowing over the face of the sand in a thin film the oil may be evaporated to such an extent by the gas being produced that it cannot hold all the paraffin in solution, and some will crystallize out. In wells where vacuum is used, a greater evaporatiion of the oil takes place. In the laboratory, it has been observed that when oil, containing small suspended particles of wax or other substances, flows over a surface in a film thinner than the diameter of the particles, these particles stick to the surface.

The raising and lowering of the fluid level by intermittent pumping should not result in the deposition of paraffin on the sand unless the oil is saturated and contains suspended particles of paraffin. If the oil is not saturated with wax, it will have a tendency to dissolve any paraffin that has been deposited on the surface of the sand while it was covered with only a thin film of oil.

Preventing Accumulation of Paraffin on the Face

If possible, the fluid level should be maintained at the top of the sand at all times. This will prevent the accumulation of paraffin on the face of the sand, even though the oil contains suspended particles of paraffin, as this suspended paraffin will not have an opportunity to become firmly attached to the sand. If the oil that accumulates with intermittent pumping is saturated and contains suspended particles of wax, the alternate covering and exposing of the sand will have a tendency to increase the deposition of paraffin.

In some fields the producers are putting back into the sand the vapors that are made when the gasoline is weathered. These vapors, when dissolved in the oil remaining in the sand, increase its ability to hold paraffin in solution and therefore tend to prevent its deposition in the pores or on the face of the sand.

If tools are used to remove paraffin from the casing or tubing, care should be taken not to force a large quantity of it down into the bottom of the well where it may plug the sand. When heat is used to melt the paraffin in casing or tubing, the paraffin may run down and plug the sand; however, if the sand is covered with oil, this will usually be prevented, as the wax will be dissolved or remain suspended in the oil.

Electric Heaters for Use at the Face

In most cases, heat or solvents are used, either combined or separately, to remove paraffine that has been deposited on the face or in the pores of the sand.

Electric heaters can be used if they can be lowered into the well, either on a wire line or on the end of the tubing; the latter will allow the well to be pumped while the heater is in operation. The sand should be covered with oil while the heater is in use, so that it will dissolve the paraffin and carry it in suspension to the top of the well, instead of allowing it to melt and accumulate in the bottom of the well, where it might congeal when the heater is turned off. Kerosene or crude oil can be added if the fluid level will not come up to the top of the sand, or if it cannot be maintained while the well is pumping. A temperature slightly above

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the melting point of the paraffin should be used, as this will insure immediate solution of the paraffin in the oil that is being produced by the sand or being added to the well.

By means of a 20 kilowat hour heater, the oil in the bottom of a well having a normal temperature of 103 degrees Fahrenheit was raised to 220 degrees Fahrenheit. This temperature was maintained for several days and then the heater was turned off. The sand was heated sufficiently so that the temperature of the oil did not cool to 103 degrees again until the seventh day after the heater was turned off.

Figuring power at 1¼c per kilowat hour, this heater would cost $6 per day to operate. This method of heating the sand is probably the cheapest and most economical method of removing paraffin that is deposited on the face or in the pores of the sand adjacent to the well.

Steam or Flame for Heating the Face

Steam also is used for this purpose. It is not as satisfactory as electricity because it does not obtain the required temperature so easily. The steam also cuts the oil badly and often causes caving of shale breaks within or above the sand, which necessitates cleaning with tools after the steaming operatioin is completed. As a general rule, when steam is used, it is carried to the bottom of the well in tubing and is there released. Superheated steam was used in a well similar to the one in which the electric heater was used. The steam had a temperature of 740 degrees Fahrenheit as it entered the well, and the temperature at the bottom of the well was approximately 230 degrees Fahrenheit. The well had two string of tubing and was pumped continuously while it was steamed. A temperature of 230 degrees Fahrenheit would melt any paraffin that might be present in the sand or in the pores adjacent to the sand, but the cost of operating steam equipment for that temperature is much greater than that of operating electric heaters, and much better results can be obtained with the latter.

Another method of heating the sand is by the use of a flame. A string of tubing with a burner attachment is lowered into the well and a proper mixture of air and gas to sustain combustion is pumped down the tubing. The gas is ignited at the bottom, either by an electric spark or by a flare lowered into the well. A small burner at the top of the tubing indicates whether the requisite proportions of air and gas are being used.

Undoubtedly, a high temperature can be obtained by this method, but it is questionable whether it accomplishes the desired results. In very small wells the oil that accumulates during the burning operation will be burned; but in larger wells, there is a probability of a thick, tarry residuum remaining in the well after the burning operation is completed. It is also possible that the lighter constituents of the oil in the pores of the sand will be distilled off, leaving a heavy residue that will remain in the pores and plug them. It is also possible that this high temperature will tend to change the character of the sand and reduce the size of the pore openings. After using the flame, it might be advisable to add several barrels of kerosene, gasoline or crude oil to dissolve any thick residue that might remain in the well or that might flow from the sand while it is still hot. The actual cost of operating this method is somewhat less than that of the steam method but greater than the electric. The method is patented, and in addition to the cost of operation a royalty agreement must be made before it can be legally used.

Circulation of Hot Oils or Chemicals

The circulation of hot oil is often used to heat the sand and dissolve the paraffine. Generally, the well is connected to a tank containing steam coils; the oil is pumped into the tank and heated, then is allowed to run back into the well between the casing and tubing. Gasoline, kerosene, or other oils are often added to the crude oil that is cinculated, in order to increase the solubility of the paraffin. Providing the oil is hot enough and the operation is continued for a sufficient length of time, paraffin will be removed, but the method is not recommended.

Chemicals that generate heat may often be used to advantage in removing paraffin from the face of the sand. It is advisable to have the sand covered with oil. The chemical heats the oil; the heated oil dissolves the wax, and can then be pumped from the well. If the chemical is used without an appreciable amount of oil in the well, the paraffin may be melted and cooled again before it can be removed by pumping, or it may congeal in the tubing while being pumped from the well. When the chemicals are properly used, satisfactory results can often be obtained at a moderate cost.

Compressed Air or Explosives Not Recommended

The use of compressed air alone for removing paraffin may result in forcing the paraffin into the pores of the sand instead of removing it. If hot gasoline, kerosene or crude oil is first added to the well and allowed to dissolve the paraffin, the air can be used to remove the solvent and any loose sand, silt, etc., that might be in the well. Compressed air can also be used in connection with revolving reamers that cut away the sand. The tool removes the paraffin and cuts away the sand that might be plugged by the paraffin and the air carries the loosened material from the well.

The value of explosives for removing paraffin is questionable. The pressure created by the explosion might force the paraffin more firmly into the pores of the sand, or it might shatter the sand so that a layer of the surface would be removed, taking the paraffin with it.

Paraffin Troubles in Flow Lines

Two distinct problems are encountered in flow lines. The first is the deposition of parafin as a hard layer inside the pipe, gradually increasing and closing it. The second is the congealing of the entire body of oil in the flow line. These conditions usually are met in the colder periods of the year.

The accumulation of a hard deposit of paraffin generally occurs in flow lines of wells that are producing by heads, and where excessive quantities of gas are being produced. It also occurs in the flow lines of pumping wells, where the casinghead gas is connected into the flow lines. This type of paraffin is the result of the same conditions that cause the trouble in the well, and it is necessary to prevent these conditions in order to overcome the trouble. This can be accomplished by using a gas and oil separator at the well and keeping the flow line full of oil at all times. In pumping wells the casinghead gas should be run through separate lines, to prevent the formation of hard pariffin deposits in the flow lines.

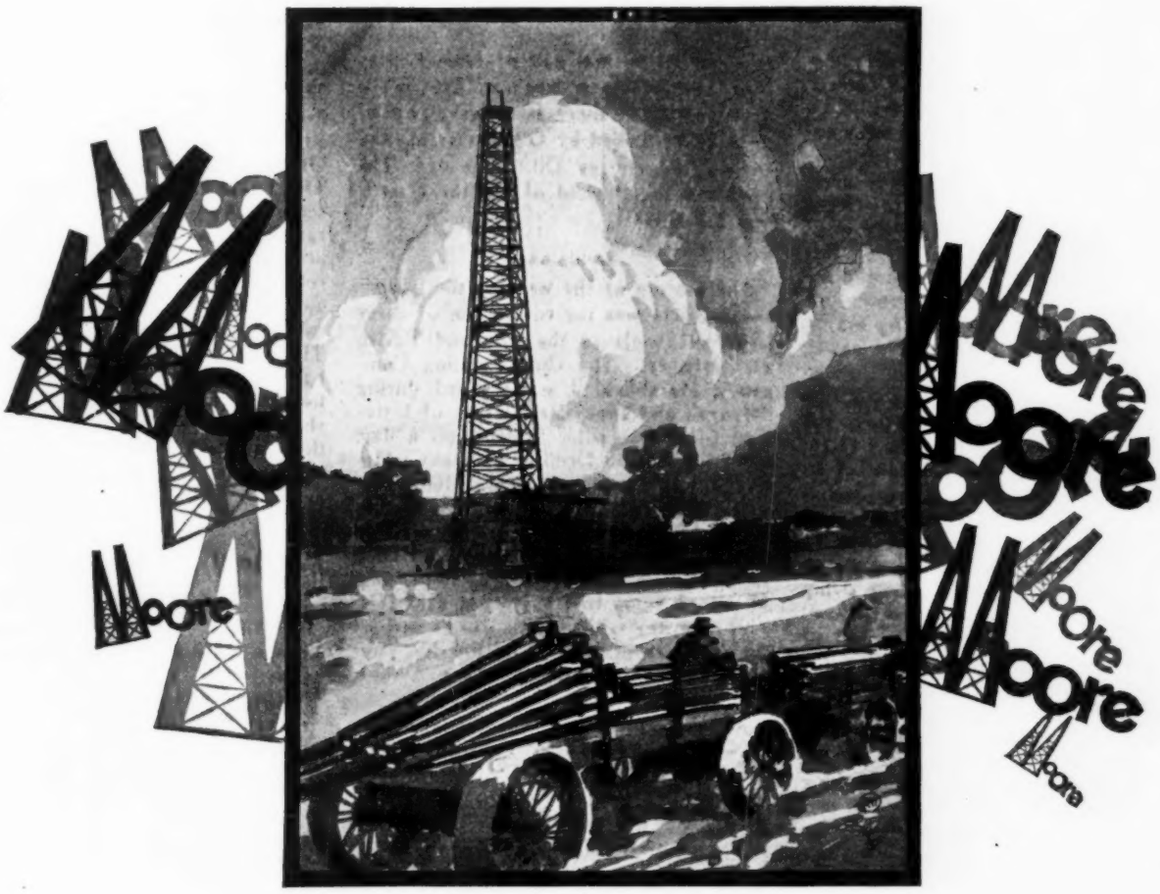
If it is impractical to separate the oil and gas at the well and prevent the accumulation of paraffin, it is necessary to remove it from the lines before the accumulation reaches the point where it seriously retards the flow of oil. This can be accomplished by running a flexible scraper through the lines occasionally. A ball of newspaper or heavy wrappng paper inserted in the flow line at the well makes an excellent scraper; the oil will force it through the line and it will remove the paraffin. When the accumulation is too hard and extensive for this scraper, it can best be removed by running steam through the lines.

The congealing of the entire body of oil in the flow lines is caused by the cooling of the oil below its pour point. If the oil is kept moving, it will not congeal at as high a temperature as when standing still, but even when kept moving it will become viscous or congeal if cooled sufficiently.

This trouble can often be overcome by using large flow lines and having the tankage near enough to the well so that the oil will reach the tank before it is cooled sufficiently to congeal. When this is not practical, it is necessary either to prevent the cooling of the line or to heat the oil.

There are two general methods of preventing the line from becoming cooled below the pour point of the oil. The first is to bury the line deep enough so that it will not be appreciably affected by atmospheric temperature changes; this is usually impractical under oil field conditions. The second method is to box a steam line with the flow line. The oil line can then be heated whenever necessary. This method is expensive, but it is one of

(Continued on page 86)



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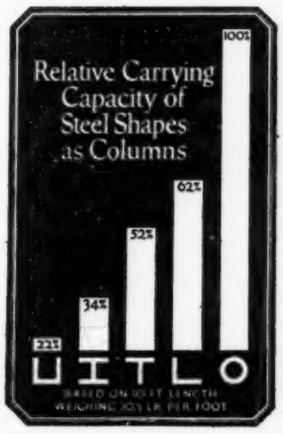

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Development of New Union County, Arkansas, Area Will Be Delayed

Shreveport, La.—That the newly discovered producing area in Union County, Arkansas, will not readily be drilled, is proven by the fact that, to date, there has been a total of only three new locations made in the vicinity of the three completed wells, two of which are producing more oil now than when they were originally brought in. The reason for this can be attributed to the fact that practically all of the acreage surrounding the discovery wells is owned by major concerns; and condition of the crude oil market.

The Ohio Oil Company's Crain 2, the first flowing well to be brought in in the new field, completed in Section 1-17-14, September 26, flowing at the rate of 60 barrels a day, rapidly increasing until it attained a flow of better than 60 barrels an hour, enjoyed a very short life by reason of the fact that the casing seat gave away or a joint of the final string collapsed, making it necessary for the well to be killed. It is now standing full of mud while the owners are debating the question of finally abandoning it or making an effort to restore it to production. Meanwhile the Magnolia Petroleum Company's Carroll 1 well, an offset to the Ohio Oil Company's Crain 2, is flowing 360 barrels of clean oil daily through two one-half inch chokes. This well was originally completed as a 19 million cubic foot gas well with a slight spray of oil, and several days later developed a larger spray, gradually increasing until it has reached its present flow, ten days after completion. The Magnolia company is stringing a four-inch gathering line from Lege tank farm, in section 2-17-15, and will run production from their well to this storage.

The three locations that have been made in the field are those of Genther et al on the McCaugh farm, 200 feet north and east of the center of section 16-17-13; Garrett-Modisette Drilling Company's Gregory 1, near the southeast corner of the northeast of the southeast of section 10-17-14; and Roark et al's Bull 1, 200 feet south and east of the northwest corner of the northwest of the southeast of Section 19-17-13. There is a possibility that both the Ohio and Magnolia companies will drill additional wells on their holdings, although neither have made locations since the two recent wells were completed. The Ohio has two locations made, both in the same section as the discovery wells, but no preparations are now being made to drill on either of them. These two are Crain 3, northeast corner of the forty acre lease on which the two previous wells were drilled, and Pumphrey 1, 510 feet east and 330 feet north of the southwest corner of the southwest of the southeast of section 1-17-14.

Aside from the activity in the Union County sector, which will evidently be classified as belonging to the Calion territory, Nevada County was the only district to record any actual development during the week. This section continues at about its normal gait of from two to four completions a week. Three wells were completed there last week, two of them being drilled by O'Brien et al, and one by the Autrey Oil Company. The combined initial yield of the three wells was 275 barrels.

Louisiana

The feature of the week in the Louisiana districts was the completion of three large gas wells in the Richland Parish gas territory. The Gulf Refining Company's Marshfield 2 was gauged during the week and showed an output of better than 64 million cubic feet of gas a day, while the Ruston Drilling Company's McCoy 2 was gauged as a 52 million foot well. Both wells are located in section 8-16-6. Moody and Seagraves completed their initial well in the Richland Parish field, McCoy 1, in section 32-16-6e, as a 30 million cubic foot gasser, at 2433 feet. This company will use this gas as part of the supply furnishing their trunk line running from this section to Port Arthur, Texas.

An interesting test was made in the Greenwood Production Company's McCruther 1 wildcat, section 15-17-17, Caddo Parish, six miles east of the Greenwood proven gas territory, last week, resulting in a good show of gas, sufficient to warrant setting a string of casing in order to secure a more thorough test. The hole was stopped in four feet of sand at a depth of 2557 feet, where a favorable showing of gas was had. Casing will be run in and cemented at 2540 feet. If this well should be brought in as commercial producer, it will perhaps extend the Greenwood-Waskom gas area a distance of about six miles, toward Shreveport. It is located near Flournoy, twelve miles east of Shreveport. The bulk of production in the Greenwood field is now coming from the shallow sands, found at from 800 to 1000 feet, although there are some wells producing from 2600 to 2800 feet.

A considerable amount of drilling is being carried forward in the Pine Island district, all of which are being drilled to the Trinity formation. There have been 17 wells completed in the field since it was discovered, in July of this year, and about 20 drilling rigs are operating in the field. Of the 17 wells producing the largest is The Texas Company's Herndon No. 5, in section 14-21-15, which is flowing at the rate of 855 barrels of oil daily. The total production from the 17 wells is 4595 barrels a day, or an average production per well of 270 barrels. Of the total number, two are being blown with air and/or gas. The fact that several recent completions have been disappointments leads to the belief that the present activity will be of short duration, gardually decreasing as the wells are completed, until it finally settles down to a few scattered locations.

Eastern Extension For Pearson Switch

Tulsa. — C. J. Wrightsman, well known Mid-Continent wildcatter, extended the Pearson Switch pool of Pottawatomie County late last week several hundred feet to the east by completion of his Thompson 1, located in the southeast of the northeast of the northwest of section 20-7-4-e.

Thompson 1 topped the Hunton lime at 3816 feet and at 3885 feet filled 300 feet with oil.

Independent Oil & Gas Company's Fried 1, in the southeast corner of the northeast of the northeast of 23-7-4, picked up a gas show at 3709 feet and is setting 6⅝-inch casing at this depth.

The discovery well at Pearson Switch is located in section 19.

R. J. Shornhorst has been appointed to a place on the sales force of Reading Iron Company. His headquarters will be at 1302 First National Bank Building, Pittsburgh, and he will confine his efforts to Pennsylvania.

Humble Secures Leases on Bulk of Submerged State Land Along Texas Gulf Coast

Houston.—Through competitive bids the State of Texas last Saturday awarded leases on 468,983 acres of submerged lands along the Gulf Coast, conferring mineral and oil rights to the lessees for a total consideration of $71,212. Humble Oil & Refining Company acquired most of the area, paying approximately $59,782 for 449,245 acres. The leases comprise lands in Galveston, Chambers, Jackson, Matagorda, Calhoun and Nueces Counties. Humble was the only company obtaining leases in the first four of those counties, and gained a large part of all land that was leased in Calhoun County.

In Galveston County Humble leased 38,800 acres in East Bay for $4268, and 17,200 acres in Galveston Bay for $1892. In Chambers County $16,401 was paid for 149,100 acres located within the county and in Galveston Bay. The Jackson County lease, including 3837 acres in Carancaua Bay, was obtained for $575. The acreage that Humble secured in Matagorda County includes 127,380 acres in Matagorda Bay, for which $19,407 was paid, and 21,000 acres in Tres Palacios Bay, leased for $3150.

In Calhoun County Humble Oil & Refining Company secured 54,200 acres in Matagorda Bay for $8130, and 37,728 acres in Lavaca Bay for $5959. In the same county S. M. Newton of New York City was awarded 5116 acres in Caranchua Bay for $1074 and 4695 acres in Kellers Bay for $986.

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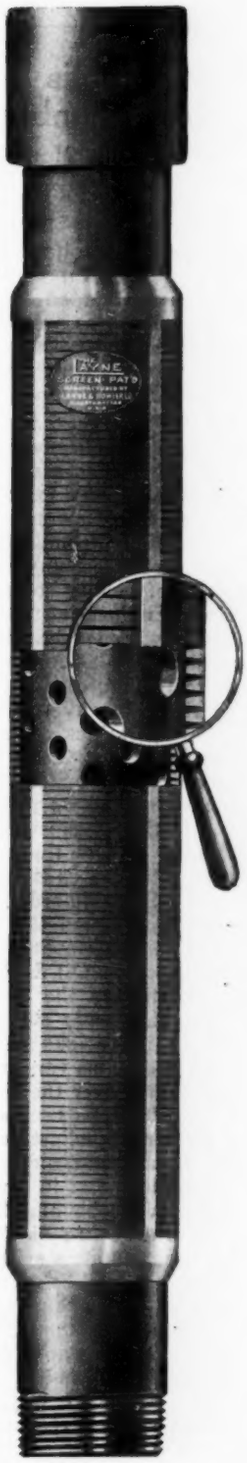

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Mountain States Field Development Notes

Minneapolis Interests Buy Kevin-Sunburst Leases

Great Falls, Mont.—Reliable report this week is to the effect that the Radigan-Hungerford holdings in the Kevin-Sunburst field, have been sold to Minneapolis capital for $450,000. Some 200 acres of three different tracts of land are included in the transaction. There are three producing wells on the holdings, and recently two gushers of 500-barrel capacity have been completed on acreage immediately adjacent to the properties.

Formal application for a grant for a right-of-way across all public roads in Cascade County for the installation of a pipe line to convey natural gas to Great Falls from the Kevin-Sunburst field was filed a week ago with the board of county commissioners by the Hope Engineering & Supply Company. Grant will not be given, it is stated, until a detailed map and specifications as to the route of the line is furnished by the company to the board.

Oil operations were brought into the city of Great Falls a fortnight ago whe nthe Lone Star Montana Oil Company spudded its test on sw 13-21-3e. Production is expected in the Ellis formation at less than 1000 feet. Structure is known as the Black Eagle.

The State Board of Land Commissioners accepted the bids of Arro Oil & Refining Company of Lewistown and the Bluebird Oil & Refining Company of Butte for the State's royalty oil. Nine bids were submitted from companies in various parts of the State, with premiums varying from 10c to 90c per barrel over the field price. Conditions of the bids were numerous.

Golfers' Syndicate completed its well on Bannatyne structure, section 34-26n-1w, at 1680 feet in a water sand, thereby proving beyond further doubt the western closure of the structure. Water was found in a 70 foot sand, which has been established as being continuous in the field. Well was drilled to the Ellis-Madison contact, where there was sulphur water, and is now being plugged to abandon. Eight operations are now under way in this district, which was but recently proved for production.

Plan Carbon Black Plant At Rock Spring, Wyo.

Rock Springs, Wyo.—The situation in Rock Springs and its adjacent oil and gas fields is tinged with considerable optimism as winter comes on. Road work, which has been sadly needed during the summer, is now being done and will be continued as long as the clemency of the weather permits.

Another hope for a carbon black plant near this town was aroused by a visit this week from Dr. Edwin Binney of Binney & Smith of New York, and Victor Cotner, an eminent geologist. Dr. Binney is president of the Columbian Carbon Company and Mr. Cotner is its chief geologist. The company is one of the largest producers and users of carbon black in the United States, and for some time it has been considered probable that it would erect a plant in the territory where there is so much unused gas available.

Morris-Myers interests are said to have authorized the drilling of three more wells on Hiawatha Dome, on the Colorado side of the line.

PERSONALS

Dr. Edward Binney, Jr., assistant research geologist of Yale, is in Cody, Wyoming, resting from several years strenuous endeavor.

C. V. Hickman of Seattle is in Casper for a short time laying plans for the drilling of a wildcat well on his properties near Chadron, Nebraska.

Capt. H. A. Stuart of Washington, D. C., one of the receivers of the Teapot Dome lease and a direct representative of the Navy Department, visited in Casper a week ago on one of his regular trips into the territory.

Frederick J. Vicks, president of General Finance Company of Ogden, Utah, investigated oil structures about Rock Springs, Wyoming, last week. His visit is connected in the minds of observers with the proposal to pipe natural gas from Baxter Basin and Hiawatha Dome to the cities of Ogden and Salt Lake.

T. S. Cooke, western manager for the Standard Oil Company of Indiana, has returned to Casper from Venezuela, where he has been for the last few months. After a time here Mr. Cooke will go to New York, where he will be in charge of the operations of the Pan American Petroleum & Transport Company, which has refineries in Louisiana, Tampico and Baltimore, and which will build a new plant in Venezuela.

Martin Falk, president of the Wyoming Sheep, Oil & Mineral Company of Minneapolis, was in Casper last week on one of his regular business trips. Mr. Falk's company is deepening its well in the south end of the Derby Dome field in Fremont County, the total depth at present being 2600 feet. The Morrison sand is the next objective. The company also plans to drill another test for shale oil in its acreage west of the Salt Creek field.

La Barge to Have Line by First of Year

Kemmerer, Wyo.—It is now definitely expected that the first of the year will see construction begun on the pipe line from the LaBarge field to railhead at Opal, all surveys and preliminary work having been completed by interests identified with the Midwest Refining Company. Daily production of the field is now estimated at 1800 barrels and by spinrg it is expected that more than 2500 barrels will be edveloped. California Petroleum Corporation is erecting an 80,000-barrel steel tank in the field for storage in addition to that cared for by the 55,000-barrel tank which has been up for the last year. These two tanks will be supposed adequate for the surplus crude pending the laying of the pipe line.

Oregon Basin Operations Waiting for Power

Cody, Wyo.—Operations in the Oregon Basin field southeast of here are marking time at present, due to the fact that the high tension line of the Oil Fields Power Company, which is being strung from Shoshone dam, has not yet been completed, although it is almost finished. Wolverine Oil Company is planning to drill its well on the Rue permit with the Hild Drive rotary with automatic controls and feeds and it expects to finish the well 30 days from the date of spudding. The Producers & Refiners will use a similar outfit for its test on the consolidated Fred Frisby permit.

Set Long String of Big Casing in Wyoming

Casper, Wyo.—Producers & Refiners Corporation is setting the longest string of 15½-inch casing that has ever been set in the state of Wyoming, in its No. 8 well in section 7-26-89 at Wertz Dome. Total length of this string is 2323 feet. This test is being rotary-drilled and is intended for the Sundance sand or even deeper horizons. No well has ever been drilled below the big gas sand in this district, which is two miles northeast of the Little Lost Soldier field in Carbon County.

Start Shale Plant

Green River, Wyo.—Wyoming Oil Products Company has started the operation of its shale oil plant here. Capacity of the plant is 50 tons per day, and a recovery of one barrel per ton is expected. The M. J. Trumbull eduction process, operated by superheated steam, is the process being used.

WOLVES OF THE OIL FIELDS

One grey form stalking close — soon to be joined by another—then another. The wolf will spring to the kill when reinforced by the pack.

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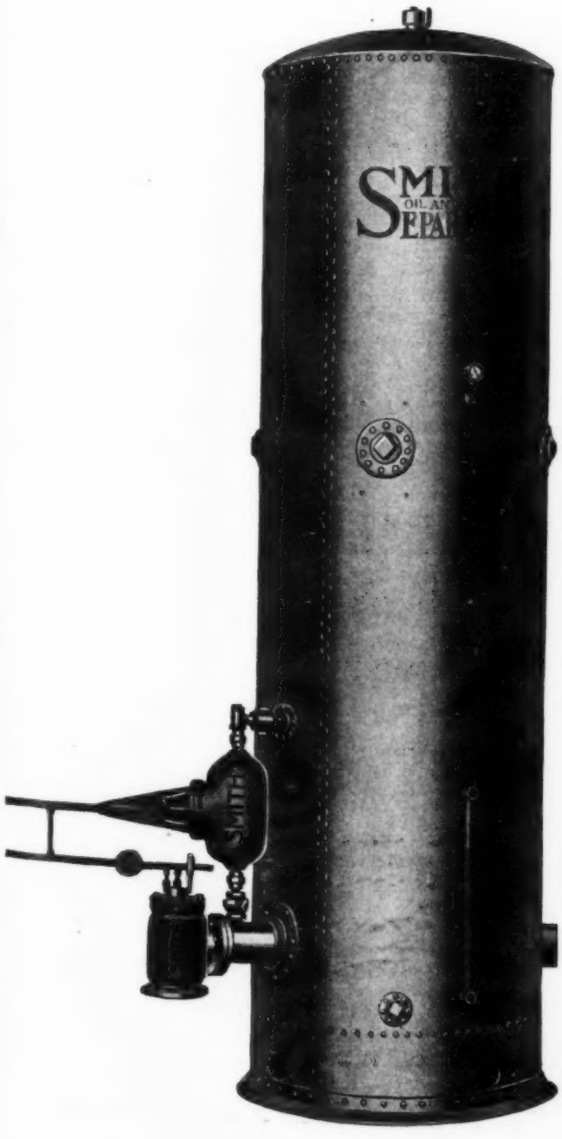

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Lincoln County Wildcat Deepened, Increases

Tulsa.—Texas Pacific Coal & Oil Company's Bett 1 wildcat which came in early in September for 1000 barrels in the Wilcox sand, producing 48 gravity crude at its location in the southwest corner of the southeast of the southeast of section 31-17-5, Wildhorse area of Lincoln County, increased its production the first week in October to 1800 barrels a day when deepened a few feet to 4207 feet. Production is free from water, and the temperature is around 80 degrees Fahrenheit. The well was on the decline at the time of deepening. It is six miles south and slightly west of the town of Cushing, and approximately 15 miles due west of the lower end of the Shamrock pool, one of Oklahoma's greatest old producing areas.

Four of the five settled pools in Lincoln showed a slump in production during the week ending October 4. Davenport, with 210 wells, averaged 2786 barrels, a decline of 116 barrels; Stroud, with 65 wells, averaged 1252 barrels, a decline of 28 barrels; Deep Rock, with 28 wells, averaged 1148 barrels, decline 28 barrels; while Ingalls, with 10 wells, averaged 200 barrels, decline 107 barrels. Skellyville pool, opened by Skelly Oil Company, gained 43 barrels during the week when 27 wells produced a daily average of 561 barrels.

West Texas Production

CRANE COUNTY

	Producing Wells	Daily Average Prod.
Church & Fields—		
Simms Oil Co. & Atlantic Oil Prod. Co.	25	*33,985
Landreth Production Corporation	15	14,350
Eastland Oil Co. & Collett-O'Keefe	8	13,575
Tidal Oil Co. & Turman-Maxwell	18	10,255
Humble Oil & Refining Co.	11	6,360
Magnolia Petroleum Co.	25	4,970
Pecos Oil Company	10	4,675
Prairie Oil & Gas Company	10	*4,345
Gulf Production Company	10	1,535
Geo. Church-Fields-Weekly	3	1,610
Independent Oil & Gas Co.	3	*895
The Texas Company	2	280
Geo. Church & Bob Fields	2	260
Stidham & Thrasher	1	10
Totals	143	97,165
Gulf-McElroy—		
Gulf Production Company	51	*20,475
Gulf-Waddell—		
Gulf Production Company	1	45
Marland-Hughes—		
Marland Oil Company	16	745
The Texas Company	10	250
McMan Oil & Gas Company	2	80
Independent Oil & Gas Company	1	10
Totals	29	1,085
Totals for Crane County	224	118,770

UPTON COUNTY

	Producing Wells	Daily Average Prod.
Texas Pacific Coal & Oil Co.	15	2,865
Marland Oil Company	78	2,645
Dixie Oil Company	35	2,485
Roxana Petroleum Corp.	39	2,430
The Texas Company	19	2,050
Prairie Oil & Gas Company	8	2,035
Gulf Production Company	15	1,385
Humble Oil & Refining Co.	9	1,345
Independent Oil & Gas Co.	26	675
Champlin Refining Company	1	515
Amerada Petroleum Corporation	6	250
Snowden & McSweeney	1	245
Sun Oil Company	10	210
Wentz Oil Corporation	3	140
Tidal Oil Company	2	125
Republic Prod. Co. & Marland Oil Co.	5	110
Pure Oil Company	1	90
Simms Oil Company	3	50
Atlantic Oil Producing Company	1	35
Bryant & Atlantic Oil Prod. Co.	2	30
McMan Oil & Gas Company	2	25
White Eagle Oil & Refining Company	1	20
Texon Oil & Land Company	1	15
Totals	284	19,875

JONES COUNTY

	Producing Wells	Daily Average Prod.
Phillips Petroleum Co.	10	915
Marland Oil Company	3	350
Mid-West Exploration Company	4	205
Stebbins Oil & Gasoline Co.	1	15
Atlantic Oil Producing Co. et al	1	5
Totals	19	1,490

BIG LAKE (REAGAN COUNTY)

	Producing Wells	Daily Average Prod.
Big Lake Oil Company	117	18,305
Texon Oil & Land Company	79	5,525
Totals	196	23,830

PECOS COUNTY

	Producing Wells	Daily Average Prod.
Mid-Kansas & Transcontinental	12	*4,675
Simms Oil Company	1	2,605
Roxana Petroleum Corporation	1	2,080
The California Company	1	*935
McMan O. & G. Co. & Marland Oil Co.	3	*915
Marland Oil Company	1	*600
Gulf Production Company	1	*475
Gulf Prod. Co. (Crockett County)	1	*335
Humble Oil & Refining Company	1	*400
Crude Oil Co. (was Allsman-Bell)	1	90
Red Bank Oil Company	1	*25
Totals	24	13,135

WINKLER COUNTY

	Producing Wells	Daily Average Prod.
Southern Crude & R. A. Westbrook et al	2	6,115
Southern Crude Oil Purchasing Co.	3	*985
Pure Oil Company	1	*930
Gulf Production Company	1	*895
Murchison-Cranfill-Marland Oil Co.	1	605
Independent Oil & Gas Company	1	25
Totals	9	9,555

MITCHELL COUNTY

	Producing Wells	Daily Average Prod.
The California Company	95	2,535
Magnolia Petroleum Company	22	595
Atlantic Oil Producing Co.	8	225
Eastland Oil Company et al	9	180
Tidal Oil Company	2	35
Fred Carey et al	1	20
Totals	137	3,590

HOWARD COUNTY

	Producing Wells	Daily Average Prod.
Marland Oil Company	32	1,160
Magnolia Petroleum Company	34	1,065
Pure Oil Company	4	295
Lockhart & Company	7	140
Frank M. Greene Corp. (was Reeves et al)	2	135
Bristow & Merrick	3	65
E-H-E Oil Company	1	55
Humble Oil & Refining Company	2	35
Mid-West Exploration Company	2	50
Godley Oil & Gas Company	1	25
L. C. Harrison et al	1	25
Owen-Sloan et al	1	25
Comet Petroleum Company	1	25
Marland & Texon Oil & Land Company	1	25
Gulf Production Company	1	15
Dixie Oil Company	1	10
Totals	95	3,190

CROCKETT COUNTY

	Producing Wells	Daily Average Prod.
Cushing Ref. & Gasoline Co.	1	280
Humble & Marland Oil Company	12	705
J. K. Hughes Dev. Co.	5	245
Republic Production Co.	2	150
Carl Cromwell	3	120
Gulf Production Company	6	115
Taylor-Link Oil Co. & Kirby Pet. Co.	1	105
Roxana Petroleum Corp.	1	20
Totals	31	1,740

GLASSCOCK COUNTY

	Producing Wells	Daily Average Prod.
Marland Oil Co. & Texon Oil & Land Co.	2	300

RUNNELS COUNTY

	Producing Wells	Daily Average Prod.
Ladd-Hill & Sillix	1	120

SCURRY COUNTY

	Producing Wells	Daily Average Prod.
The Northwest Company	5	50

LOVING COUNTY

	Producing Wells	Daily Average Prod.
Lockhart & Company et al	2	35

ECTOR COUNTY

	Producing Wells	Daily Average Prod.
J. C. Cosden & The Texas Co.	1	20
Totals for all fields	1030	195,700
Totals previous week all fields	1024	187,020

*Production partially pinched.

THOUSANDS OF "UNITED" TANKS

are now in use throughout

THE MID-CONTINENT FIELD

—by the Leading Operators

"UNITED" CAN FURNISH ALL TYPES AND SIZES UP TO AND INCLUDING 80,000 BBLS.

STANDARD SIZES IN STOCK FOR IMMEDIATE SHIPMENT

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IRON WORKS, INC.
KANSAS CITY, MO.

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DALLAS, TEX. MAGNOLIA BLDG.

CRUDE OIL PRICE QUOTATIONS

CURRENT POSTINGS

EASTERN STATES

	Oct. 12 1927
New York Transit	2.65
Bradford District	2.65
National Transit	2.55
Southwest	2.55
Eureka	2.50
Buckeye	2.25
Macksburg	2.80
Gaines	2.60
Somerset	1.70
Cabell	1.60
Ragland	.95
Corning, 35-cent grade	1.45
Corning, 25-cent grade	1.35
Keister	1.30

CENTRAL STATES

Illinois	1.60
Indiana	1.48
Lima	1.71
Plymouth	1.33
Princeton	1.60
Waterloo	1.18
Wooster	1.57

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, All grades 1.50

MID-CONTINENT

Prairie, Sinclair, Gulf, Texas and Magnolia*

	Oct. 12 1927
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

*Magnolia's price for below 30 gravity is $1.05. Magnolia also pays Mid-Continent prices for Chalk field (Howard County Crude.)

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs crude.

Humble O. & R. Co.* and Texas Co.

	Oct. 12 1927
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.0 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Corsicana Heavy, 1.00 per barrel, posted by Magnolia.

*Until further notice, Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs crudes purchased at a gravity lower than 28 degrees will be paid for at the posted price for 28 degrees gravity.

SOUTH TEXAS

Mirando	1.00

SOMERSET
Grayburg

Below 33 gravity	$1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, Below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 is $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

(Continued on page 58)

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 galoins in fields indicated)

Gravity (degrees)	Signal Hill	Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Domingues	Torrance	Richfield	Whittier La Harbra	Montebello	Coyotte Hill	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler
14-14-9	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
16-16-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
17-17-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
18-18-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
19-19-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
20-20-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	..	.77	.77	.77	.76	.76
21-21-9	.86	.86	.86	.86	.86	..	.86	.86	.85	.85	.86	.85	..	.79	.79	.79	.77	.77
22-22-9	.87	.87	.87	.87	.87	..	.87	.87	.85	.85	.87	.85	..	.81	.81	.81	.78	.78
23-23-9	.88	.88	.88	.88	.88	..	.88	.88	..	.85	.88	.85	..	.83	.83	.83	.79	.79
24-24-9	.89	.89	.89	.89	.89	..	.89	.89	..	.85	.89	.85	..	.85	.85	.85	.80	.80
25-25-9	.90	.90	.90	.90	.90	.90	.90	.90	..	.86	.90	.86	..	.87	.87	.87	.81	.81
26-26-9	.92	.92	.92	.92	.92	.92	.92	.92	..	.87	.91	.87	..	.89	.89	.89	.83	.82
27-27-9	.94	.94	.94	.94	.94	.94	.94	.94	..	.88	.92	.88	..	.91	.91	.91	.85	.83
28-28-9	.96	.96	.96	.96	.96	.96	.96	.96	..	.89	.93	.89	..	.93	.93	.93	.87	..
29-29-9	.98	.98	.98	..	.98	.98	..	.98	..	.90	.94	.91	..	.96	.96	.96	.89	..
30-30-9	1.00	1.00	1.00	..	1.00	1.00	..	1.00	..	.91	.95	.93	..	.99	.99	.99	.91	..
31-31-9	1.03	1.03	1.03	..	..	1.03	..	..	..	..	..	.95	..	1.02	1.02	1.02	.93	..
32-32-9	1.06	1.06	1.06	..	..	1.06	..	..	..	..	..	.97	..	1.05	1.05	1.05	.95	..
33-33-9	..	..	..	..	..	1.09	..	..	..	..	..	.99	..	1.08	1.08	1.08	.97	..
34-34-9	..	..	..	..	..	1.12	..	..	..	..	..	1.01	..	..	..	1.11	.99	..
35-35-9	..	..	..	..	..	1.15	..	..	..	..	..	1.03	..	..	..	..	1.01	..
36-36-9	..	..	..	..	..	1.18	..	..	..	..	..	1.06	..	..	..	..	..	..
37-37-9	..	..	..	..	..	1.21	..	..	..	..	..	1.09	..	..	..	..	..	..
38-38-9	..	..	..	..	..	1.24	..	..	..	..	..	1.12	..	..	..	..	..	..
39-39-9	..	..	..	..	..	1.27	..	..	..	..	..	1.15	..	..	..	..	..	..
40-40-9	..	..	..	..	..	1.30	..	..	..	..	..	..	..	..	..	..	..	..
41-41-9	..	..	..	..	..	1.33	..	..	..	..	..	..	..	..	..	..	..	..
42-42-9	..	..	..	..	..	1.36	..	..	..	..	..	..	..	..	..	..	..	..

This Sign will tell motorists you sell correct lubrication

THIS sign *always* identifies the station along-the-highway where a motorist can buy *the Oil* which will give him correct lubrication.

The motorist is learning that where he sees this sign he gets the *right grade* of motor oil to seal the power in his engine at every degree of wear.

Only Opaline Motor Oil is recommended on the basis of engine-wear—*as indicated by the mileage on the speedometer!* And only Opaline Dealers have this sound method for increasing gallonage.

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Also Makers of Sinclair Gasoline and H-C Gasoline

45 NASSAU STREET, NEW YORK

Atlanta Boston Chicago Houston Kansas City

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MARKHAM

	Oct. 12 1927
The Texas Company	
All grades	1.00

LULING

All grades	1.00

PANHANDLE

(Humble Oil & Refining Company and Magnolia Petroleum Company, Gulf Pipe Line Company, and Kay County Gas Company)*

Hutchinson, Carson and Wheeler counties, all grades	.75

*Gulf and Kay County do not post in Wheeler County.

Gray County

(Humble Oil & Refining Company)

28 to 28.9 gravity	.80
29 to 29.9 gravity	.82
30 to 30.9 gravity	.84
31 to 31.9 gravity	.86
32 to 32.9 gravity	.88
33 to 33.9 gravity	.90
34 to 34.9 gravity	.92
35 to 35.9 gravity	.94
36 to 36.9 gravity	.96
37 to 37.9 gravity	.98
38 to 38.9 gravity	1.00
39 to 39.9 gravity	1.02
40 to 40.9 gravity	1.04
41 to 41.9 gravity	1.06
42 to 42.9 gravity	1.08
43 to 43.9 gravity	1.10
44 and above	1.12

(Humble Oil & Refining Company)

Crane, Upton, Crockett and Pecos counties, all grades	.60

WEST TEXAS

(Humble, Gulf, Magnolia, Kay County Gas Company and Southern Crude Oil Purchasing Company.)*

Crane, Crockett, Pecos, Upton and Winkler Counties	.60

*Kay County Gas Company does not buy in Winkler and Pecos Counties, and Southern does not buy in Pecos or Crockett.

Col-Tex Refining Company

Mitchell County	$ .93

WYOMING-MONTANA

Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	133
Grass Creek	1.33
Rock Creek	1.25
Lost Soldier	.95
Lance Creek	1.33
Mule Creek	1.10
Notches	.65
Big Muddy	1.25
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.55
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek

Midwest Refining Company

29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30

MONTANA

Sunburst	1.35
Cat Creek	1.33
Lake Basin	2.20

NEW MEXICO

Artesia	1.00
Hogback	1.38

CANADIAN CRUDE

	Oct. 12 1927
Oil Springs	2.18
Petrolia	2.11

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel.

LOUISIANA-ARKANSAS

(Standard of Louisiana, Louisiana Oil Refining Company, Gulf Refining Company of Louisiana and The Texas Co.) Homer, Haynesville, Caddo, El Dorado, De Soto and Chrichton.

Below 28 gravity	1.10
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Atlantic Oil Producing Company posts this same schedule on Homer, Haynesville, and West El Dorado.

Magnolia Petroleum Company has the same posting on Pine Island, Haynesville, Eldorado and Bull Bayou.

STEPHENS

(All Companies)

Below 28	1.00
28 to 28.9 gravity	1.04
29 to 29.9 gravity	1.04
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.08
32 and above	1.10

SMACKOVER

(All companies)

Below 24 gravity	$ .90
24 and above	1.15
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.90
Cotton Valley	1.00
Calion	.90

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

American Petroleum Institute Figures. Barrels of 42 gallons)

	Week Ended Oct. 1	Week Ended Sept. 24
AT ATLANTIC COAST PORTS—		
Baltimore	206,000	279,000
Boston	145,000	51,000
New York	625,000	751,000
Philadelphia	141,000	.....
Others	79,000	356,000
Total	1,196,000	1,437,000
Daily average	170,857	205,286
AT GULF COAST PORTS—		
Galveston District	40,000	40,000
New Orleans and Baton Rouge	147,000	50,000
Port Arthur and Sabine District	.....	.....
Tampa	.....	20,000
Total	187,000	110,000
Daily average	26,714	15,714
AT ALL UNITED STATES PORTS—		
Total	1,383,000	1,547,000
Daily average	197,571	221,000
Daily average four weeks ended	207,071	205,786

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

American Petroleum Institute Figures. Barrels of 42 gallons)

	Week Ended Oct. 1	Week Ended Sept. 24
AT ATLANTIC COAST PORTS—		
Baltimore	249,000	*78,000
Boston	92,000	117,000
New York	378,000	275,000
Philadelphia	80,000	196,000
Others	108,000	.....
Total	907,000	666,000
Daily average	129,571	95,143
AT GULF COAST PORTS—		
Daily average	.....	.....
Total Atlantic and Gulf Coast Ports	907,000	666,000
Daily average	129,571	95,143
Daily average four weeks ended	117,000	116,714
DISTRIBUTION OF TOTAL CALIFORNIA RECEIPTS IS AS FOLLOWS:		
Crude	233,000	78,000
Gasoline	227,000	328,000
Gas oil	223,000	79,000
Fuel oil	224,000	181,000
Total	907,000	666,000

*Revised.

ALLIED

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Algyre Machine.
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Breckenridge Fishing Tool Company.
Bridgeport Machine Co.
Brown Welding Works.
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Crotty & Company.
Cushing Machine & Tool.
Dunnigan Tool & Supply.
Eldorado Machine & Tool.
Fairport Machine Co.
Farley Machine Works.
Federal Supply Co.
Ft. Worth Drilling Tool.
Hinderliter Tool Co.
Larkin & Co.
Larkin Packer Co.
Leidecker Tool Co.
Lone Star Tool Co.
Lucey Manufacturing Co.
Magnolia Petroleum Co.
Mid-West Refining Co.
Murray Tool Co.
Muskogee Tool Co.
Norwalk Drilling Tool Co.
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Oil Well Supply Co.
Oklahoma Iron Works.
Chas. Phillips.
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Vickers Ltd. London.

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Standlee Wire Line Oil Saver
Cincinnati Products
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TULSA, OKLA.

Say You Saw it in The OIL WEEKLY

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

Month—	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Ave.	Gross
January, 1926	449,370	100,130	260,180	90,290	43,990	181,190	101,000	102,300	621,300	1,946,980	60,356,380
February	450,037	101,937	245,989	91,550	45,090	169,676	99,000	98,412	605,250	1,909,637	53,469,836
March	454,762	103,300	260,262	92,712	48,787	164,312	97,625	102,325	604,500	1,929,562	59,816,422
April	467,175	101,825	263,612	88,812	50,562	169,824	100,875	106,675	600,000	1,947,387	58,421,610
May	463,750	105,690	277,700	94,550	58,150	175,430	105,700	112,300	602,720	1,995,990	61,875,690
June	456,450	107,637	302,187	89,912	60,412	167,887	106,250	112,925	606,925	2,013,187	60,395,610
July	456,920	110,320	336,600	114,760	57,460	161,870	104,700	108,520	613,940	2,062,470	63,936,570
August	465,137	111,600	381,550	161,237	56,787	157,375	108,350	110,737	609,725	2,162,662	67,042,522
September	465,387	113,037	402,212	175,512	56,575	154,037	110,125	105,825	598,100	2,180,862	65,425,860
October	497,120	114,720	439,490	170,350	58,200	149,810	109,500	99,060	611,600	2,259,850	70,055,350
November	551,225	115,425	475,987	176,425	56,575	144,100	111,125	93,537	641,325	2,365,475	70,964,250
December	561,012	118,950	483,050	181,263	55,137	139,250	110,375	87,650	659,925	2,396,112	71,279,472
January 1927 . .	591,570	117,490	460,910	176,330	53,030	132,648	108,100	83,910	655,660	2,385,650	73,955,150
February.....	683,775	116,200	479,175	154,975	52,850	128,362	107,250	85,237	642,775	2,455,612	69,157,136
March.....	707,187	115,612	475,375	154,262	51,450	124,662	104,500	87,200	644,350	2,462,625	76,341,375
April.....	723,820	115,510	476,920	155,420	50,670	114,860	107,500	89,130	643,520	2,477,350	74,320,500
May.....	716,175	114,675	488,125	151,375	47,465	113,525	113,625	89,625	633,225	2,491,975	77,374,910
June	760,712	112,662	481,950	151,650	48,762	112,612	112,125	85,725	640,325	2,506,037	75,181,125
July	839,580	108,200	476,750	144,110	55,280	110,290	111,700	87,110	621,920	2,554,940	79,203,140
August	837,750	105,187	483,812	138,787	57,375	105,175	114,750	81,837	619,825	2,544,500	78,879,500
September	796,587	105,175	489,137	143,487	53,775	101,637	111,250	73,800	636,750	2,511,650	75,349,500
October 1	809,700	105,000	505,250	140,800	52,350	100,550	110,500	77,500	635,300	2,536,950	17,755,650
October 8	807,000	104,800	506,300	139,550	51,850	100,200	110,000	72,100	633,000	2,524,800	17,673,600
Increase	.....	.....	1,050	.....	.....	.....	.....	.....	.....	.....	.....
Decrease	2,700	200	.....	1,250	500	350	500	5,400	3,750	12,150	85,050

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	Oct. 8	Oct. 1.
Hutchinson County	69,100	69,100
Gray County	11,550	11,000
Carson County	8,500	8,650
Wheeler County	1,500	1,400
Totals	90,650	90,200

NORTH TEXAS

Burkburnett	13,100	13,000
Electra	12,500	12,400
Iowa Park-KMA	2,550	2,600
Wilbarger	11,750	11,500
Archer County	25,700	25,950
Clay County (Petrolia)	500	550
Baylor County	100	100
Montague and Cooke Counties	16,800	16,600
Totals	83,000	82,700

WEST CENTRAL TEXAS

Stephens County	8,300	8,300
Eastland-Desdemona	8,950	9,400
Brown County	22,000	23,000
Coleman County	1,100	1,200
Callahan County	4,300	4,000
Shackelford County	5,450	5,650
Young County	10,500	10,350
Throckmorton County	1,300	1,350
Jack County	850	800
Palo Pinto County	700	700
Others	600	600
Totals	64,050	65,350

WEST TEXAS

Jones County	1,550	1,800
Mitchell-Scurry Counties	3,750	3,700
Howard County	3,100	3,200
Reagan County	23,200	24,050
Crane-Upton Counties 137,850		137,150
Crockett County	2,550	2,300
Pecos County	27,100	24,500
Winkler County	9,550	8,950
Others	2,500	2,400
Totals . .. .211,150		208,050

EAST CENTRAL TEXAS

Mexia	9,400	9,450
Currie	700	650
Richland	750	750
Wortham	2,750	2,750
Corsicana-Powell	14,700	14,800
Nigger Creek	1,600	1,650
Totals	29,900	30,050

SOUTHWEST TEXAS

Luling	15,200	15,650
Lytton Springs	1,550	1,700
Somerset	850	900
Laredo District	8,950	9,100
Dale	550	1,000
Others	450	500
Totals	27,550	28,900
Tex. outside Gulf Coast 506,300		505,250

TEXAS GULF COAST

West Columbia	10,000	10,500
Damon Mound	900	900
Big Creek	3,000	2,700
Boling	2,250	2,400
Blue Ridge	4,000	4,300
Pierce Junction	8,350	7,700
Humble	2,000	2,050
Goose Creek	8,000	7,900
South Liberty	2,600	2,650
Hull	16,950	15,850
Saratoga	900	900
Batson	1,400	1,150
Sour Lake	4,050	4,000
Spindle Top	52,950	54,250
Orange County	4,400	4,600
Others	3,500	3,700
Totals	125,250	125,550
Texas Total	631,550	630,800

OKLAHOMA

North Braman	2,650	2,800
South Braman	2,400	2,450
Blackwell	3,950	3,950
Hubbard	3,950	4,000
Thomas	3,750	3,750
Tonkawa	18,800	18,850
Garber	10,800	10,850
Burbank	35,050	35,450
Osage (outside Burbank)	30,800	30,800
Watchorn	1,800	1,800
Cushing	21,300	21,250
Yale Jennings	9,650	9,650
Davenport	2,800	2,900
Bristow Slick	24,900	24,950
North Okmulgee	16,200	16,200
Lyons Deaner	6,500	5,050
Stroud	1,250	1,300
Cromwell	11,800	13,200
Papoose	6,250	6,350
Wewoka	14,050	14,200
Seminole	70,150	71,750
Bowlegs	136,700	140,900
Searight	30,600	30,500
Little River	37,550	31,550
Earlsboro	178,600	179,650
Duncan District	7,000	6,950
Graham	6,500	6,650
Fox	1,900	1,900
Healdton	15,000	14,950
Hewitt	9,500	9,700
Scholem Alechem	15,500	15,850
Others	69,350	96,900
..Totals	807,000	809,700

CALIFORNIA

Santa Fe Springs	38,500	38,500
Long Beach	92,500	91,000
Huntington Beach	63,000	63,000
Torrance	20,500	20,500
Dominguez	15,000	15,000
Rosecrans	8,000	8,000
Inglewood	33,000	33,000
Midway-Sunset	84,000	84,000
Ventura Avenue	57,500	57,300
Seal Beach	66,000	70,000
Others	155,000	155,000
Totals	633,000	635,300

KANSAS

Greenwood County	32,600	32,800
Florence-Covert	1,500	1,500
Peabody-Ebling	3,850	3,800
Eldorado-Towanda	14,250	14,300
Augusta-Fox Bush	4,200	4,200
Rainbow Bend	2,150	2,100
Russell	2,500	2,500
Churchill	13,850	13,750
Others	29,900	30,000
Totals	104,800	105,000

NORTH LOUISIANA

	Oct. 8	Oct. 1.
Homer	4,700	4,700
Haynesville	7,100	7,050
Caddo Light	13,350	13,500
Caddo Heavy	4,800	4,800
DeSoto-Red River	4,050	4,050
Elm Grove	700	700
Bellevue	1,200	1,150
Cotton Valley	5,200	5,350
Urania	9,750	9,900
Pleasant Hill	1,000	1,150
Totals North Louisiana	51,850	52,350

LOUISIANA GULF COAST

Vinton	4,750	4,900
Lockport	5,400	5,600
Evangeline	1,250	1,400
Edgerly	1,700	2,000
Others	1,200	1,350
Total Louisiana Gulf Coast	14,300	15,250
Louisiana Total	66,150	67,600

ARKANSAS

El Dorado	5,300	5,450
Smackover Light	9,600	9,850
Smackover Heavy	78,100	78,350
Stephens	1,200	1,200
Nevada	2,850	2,550
Lisbon	3,050	3,050
Others	100	100
Totals	100,200	100,550

MOUNTAIN STATES

WYOMING

Salt Creek	31,300	35,800
Grass Creek	2,650	2,600
Elk Basin	1,150	1,050
Big Muddy	2,950	3,000
Lost Soldier	2,750	2,650
Rock River	2,700	2,550
Lance Creek	700	650
Teapot Dome	450	1,200
Others	4,400	5,400
Totals	49,050	54,900

MONTANA

Cat Creek	2,000	2,050
Sunburst	11,500	11,500
Others	250	250
Totals	13,750	13,800

COLORADO

Moffats (Craig)	1,650	1,650
Fort Collins	3,000	2,950
Florence	800	950
Others	1,250	1,300
Totals	6,700	6,850

NEW MEXICO

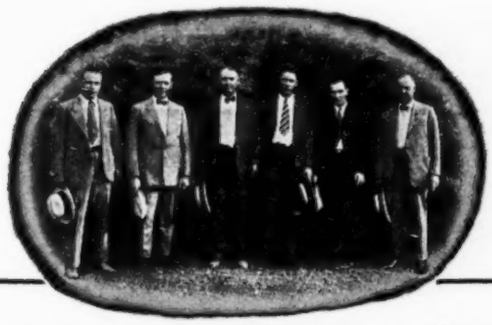
Table Mesa	450	50
Artesia	1,450	1,450
Hogback	250	250
Rattlesnake	350	100
Others	100	....
Totals	2,600	1,950
Total Mountain States	72,100	77,500

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)....	110,000	110,500

PRODUCTION SUMMARY

East of Rockies 1,819,700		1,824,150
United States 2,524,800		2,536,950



A. S. JOHNSTON DRILLING CORP.
3260 GRANT ST., R. F. D. #1 BOX 628
LONG BEACH, CALIF.

Mr. E. Tompkins,
Reading Iron Co.,
Pacific Mutual Bldg.,
Los Angeles, California

August 26, 1926

My Dear Mr. Tompkins,

Wish to advise you of some of the merits and general satisfaction we have experienced through our handling and work with the Reading Wrought Iron Casing.

First, we believe, that the Reading Casing to be the best that money can buy. Second, that it is the easiest casing to handle, that is, in making up and running it into hole, in that you have no trouble whatever with the threads, which you know to be a great labor and time saving, regardless of the length of casing to be set, you have no parting the threads being uniform.

We have set some very long strings of Reading Casing, in fact, we have set five long strings without a set back, which we believe speaks very well for the threads, joints, and the pipe in general. Have also used 300 feet of 10-inch as washover pipe for 30 days without injuring a thread or joint.

Hoping that you will accept this in the same spirit in which it is given, we beg to remain,

Very truly yours,
A. S. JOHNSTON DRILLING CORP.,

A S Johnston

READING PIPE
GENUINE WROUGHT IRON

READING IRON COMPANY DALLAS, HOUSTON, TULSA, SHREVEPORT, LOS ANGELES READING, PENNSYLVANIA

Say You Saw it in The OIL WEEKLY

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	6	6	3	3	1	1	2	2	138	497
California	15	28	13	24	..	..	2	4	8,225	21,380
Indiana	2	1	1	1	..	..	1	..	10	48
Illinois	7	3	2	1	..	..	5	2	55	10
Kansas	18	12	5	5	..	1	13	6	865	295
Kentucky	18	28	15	17	2	1	1	10	731	1,161
Louisiana	19	17	6	6	7	5	6	6	1,715	1,670
Michigan	4	7	1	7	..	..	3	..	15	115
Montana	..	7	..	6	..	..	..	1	...	1,250
Ohio	42	28	14	17	19	5	9	6	97	553
Oklahoma	64	76	37	33	5	12	22	31	29,126	25,854
Pennsylvania	6	5	..	..	3	4	3	1	...	...
Texas	99	119	61	50	8	14	30	55	24,460	20,837
West Virginia	42	26	8	5	27	16	7	5	194	24
Wyoming	..	4	..	4	..	..	..	..	...	...
Totals	342	367	166	179	72	59	104	129	65,735	73,694
Increase this week	..	..	..	..	13	..	..	..	...	...
Decrease this week	25	..	13	..	..	..	25	..	7,959	...

NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; aba—abandoned; bbls—barrels; b. s.—basic sediment; csg—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; woar—waiting on standard rig.

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Magnolia, Swartz 8, nwc ne 26-2-3	*	5122
J. Pollock 1B, se nw se 14-1-3	*	3830
McBride et al, Goodwin 1, se sw nw 2-1-4	*	3528
CREEK COUNTY—		
Skelly, Yellowhead 2, swc se nw 32-17-10	35	2713
The Texas Co., Baker 1, nec se 14-17-10	55	1929
Pontiac Oil Co., Fulsom 8, nec nw sw 13-17-10	500	2494
Dixie, Francis 5, c s l sw sw 5-17-10	50	3015
Olean Pet. Co., Harjo 2, sec nw ne sw 13-17-8	100	2297
Devonian Oil Co., Fulsom 4, c s l se ne 5-16-11	*	1907
GARFIELD COUNTY—		
Sinclair O. & G. Co., Bangerter 3, c n l nw se 26-22-4	*	2560
HUGHES COUNTY—		
Burke Greis Oil Co., McBrit 1, ne nw ne 15-8-9	*	3450
Berry Pet. Co., Alexander 5, c nw se 4-9-9	*	4275
KAY COUNTY—		
Sinclair O. & G. Co., Hall 1, sec nw 19-27-1	¶6	3510
Larutan Fuel Co., Woods 3A, nec nw 30-27-1	¶1	730
Boucher et al, Sandsyellow 1, nec nw ne 34-25-2	*	4445
Charles Balph et al, Rembe 1, c ne nw 29-27-1	*	3623
MUSKOGEE COUNTY—		
Sunray Oil Corp., Crittenden 8, nwc sw 5-14-19	75	748
Crittenden 7, sec ne nw sw 5-14-19	*	....
J. Henigan et al, E. Francis 1, c s l nw se 1-14-18	*	929
OKFUSKEE COUNTY—		
Josey Oil Co., Stubblefield 1, swc 28-12-11	*	3985
OKMULGEE COUNTY—		
F. D. Misener, R. Carter 3, c s l sw ne 10-15-14	20	1000
OSAGE COUNTY—		
I. T. I. O. Co., No. 373, nw ne nw 3-26-11	¶2	1814
No. 379, nw ne ne 17-27-11	¶2	758
No. 218, sw se se 11-26-11	*	2258
POTTAWATOMIE COUNTY—		
Magnolia, Adkins 1, sec ne 24-7-3	29	3826
Barnsdall, Holey 2, sw nw se 4-9-5	13	4154
Mid-Continent, McKinley 5, sw nw sw 9-9-5	*	....
SEMINOLE COUNTY—		
Roxana, Amery 2, sec nw 28-7-8	*	1702
Magnolia, Holwell 1, nw se ne 22-8-8	*	4221
Gypsy, July 2, sw ne nw 36-9-6	*	4258
July 1, nw ne nw 36-9-6	*	4365
Phillips, Strothers 5, ne nw se 27-9-6	*	4015
Roxana, Hull 1, nw ne se 25-9-6	*	4273
Empire G. & F. Co., Edmundson 6, se ne sw 3-9-5	*	4432
Producers & Refiners Corp., Dungan 1, se nw se 35-8-6	3045	4182
Carter, Burden 4, ne nw se 23-8-6	480	4462
Empire G. & F. Co., Wise 4, sw se nw 23-8-6	225	4343
I. T. I. O., Billington 3, sec nw 22-8-6	1120	4334
Goforth 9, ne se ne 15-8-6	436	4090
Pure, Reed 19, ne nw se 14-8-6	288	4266
Reed 15, nw ne sw 14-8-6	15	4137
I. T. I. O., Fay 6, nw se nw 13-8-6	1175	4184
Atlantic, Grayson 3, ne sw nw 13-8-6	235	4384
I. T. I. O., Lizzie 2, se sw nw 11-8-6	336	4238
Carter, L. Jones 1, nw se se, 11-8-6	2585	4130
Tidal, Harjoche 6, nw ne sw, 10-8-6	245	4171
Gypsy, Cumesy 1, se ne se 10-8-6	617	4145
Wilcox O. & G. Co., Cluck 6, se ne nw 4-9-6	197	4461
Sinclair, Polly 3, se sw nw 3-9-6	910	4648
Carter, Mandler 1, ne nw sw 3-9-6	35	4357
Barnsdall, Wasutka 3, se ne sw 12-9-5	1308	4357
Continental Oil Co., Hollins 3, nw se nw 12-9-5	1750	4258
Empire G. & F. Co., Barker 1, sw se ne 12-9-6	60	4406
Gypsy, Noble 2, se sw ne 12-9-5	7052	4340
Barnsdall, D. Davis 1-A, nwc se 11-9-5	26	4396
Gypsy, B. Carter 7, nws 11-9-5	2460	4277
Barnsdall, Brown 4, se ne nw 10-9-5	1325	4433
Magnolia, Simpson 2, se nw se 10-9-5	250	3570
The Texas Co., Brown 3, nw sw nw 10-9-5	35	4458
Barnsdall, Ingram 1, sw nw sw 1-9-5	1909	4426
Nowata O. & R. Co., Price 3, ne nw ne 3-10-8	5	3444
Pure, Thompson 1A, sec sw 33-11-8	125	4150
WAGONER COUNTY—		
Wm. McDougal, J. Dan 1, sec nw nw 21-17-15	¶2	1890
A. A. Williams, L. McIntosh 4, nec sw ne ne 12-18-17	*	282

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Liggett et al, Figg 3, sec nw 36-27-6	*	2837
Mid-Kansas O. & G. Co., McAfee 1, nec nw ne 4-28-6	*	3096
CHASE COUNTY—		
Phillips Pet. Co., Cornish 1, c nw se 36-18-6	*	1793
COWLEY COUNTY—		
Mission Oil Co., Hott 1, lot 10, blk 43, 22-32-4	100	2334
Milligan et al, Elrode 4, nwc se 6-32-5	100	2342
Carter Oil Co., Baird 1, sec sw ne 17-34-3	50	3400
Shawver et al, Shurtz 1, c nw se 19-34-3	*	1586
GREENWOOD COUNTY—		
Pryor & Lockhart, Clark 1, swc se sw 3-22-13	*	....
PRATT COUNTY—		
Elliott et al, Elliott 1, nwc sw 32-27-13	*	1055
RENO COUNTY—		
Streeter & Stearns, Crabbs 1, swc ne 1-25-8	*	....
Payne & McKenna, Long 1, c sw 21-26-8	*	....
RICE COUNTY—		
Allison & Fitzwilliams, Poland 1, c ne 36-19-8	*	....
Sparta Drilling Co., Hollscher 1, sec 2-18-10	*	....
RUSSELL COUNTY—		
Mid West Ref. Co., Dortland 6, nwc se 5-14-15	15	3089
SEWARD COUNTY—		
Wilson et al, Son 1, nec 14-33-33	*	700
SMITH COUNTY—		
Gardener et al, Smith 1, swc	*	....
SUMNER COUNTY—		
Roxana, Community 2, lot 13, blk 39, Oxford Townsite 14-32-2	600	2135
Selby O. & G. Co., Island 2, c s l nw sw ne 36-31-2	*	....

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
GREENE COUNTY—		
Carnegie Nat. Gas Co., Fordyce 1	¶1½	....
Sowers 1	*	....
Manufacturers Light & Heat Co., Grimm 3	¶1½	....
Earnest 2	¶¼	2385
Clovis & Co., Baldwin 5	*	....
Guy Patterson, Weaver 1	*	....

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
JAY COUNTY—		
Waterloo O. & G. Co., Brinkerhoff 5	10	....
Amber Oil & Producing Co., Sutton 11	*	....

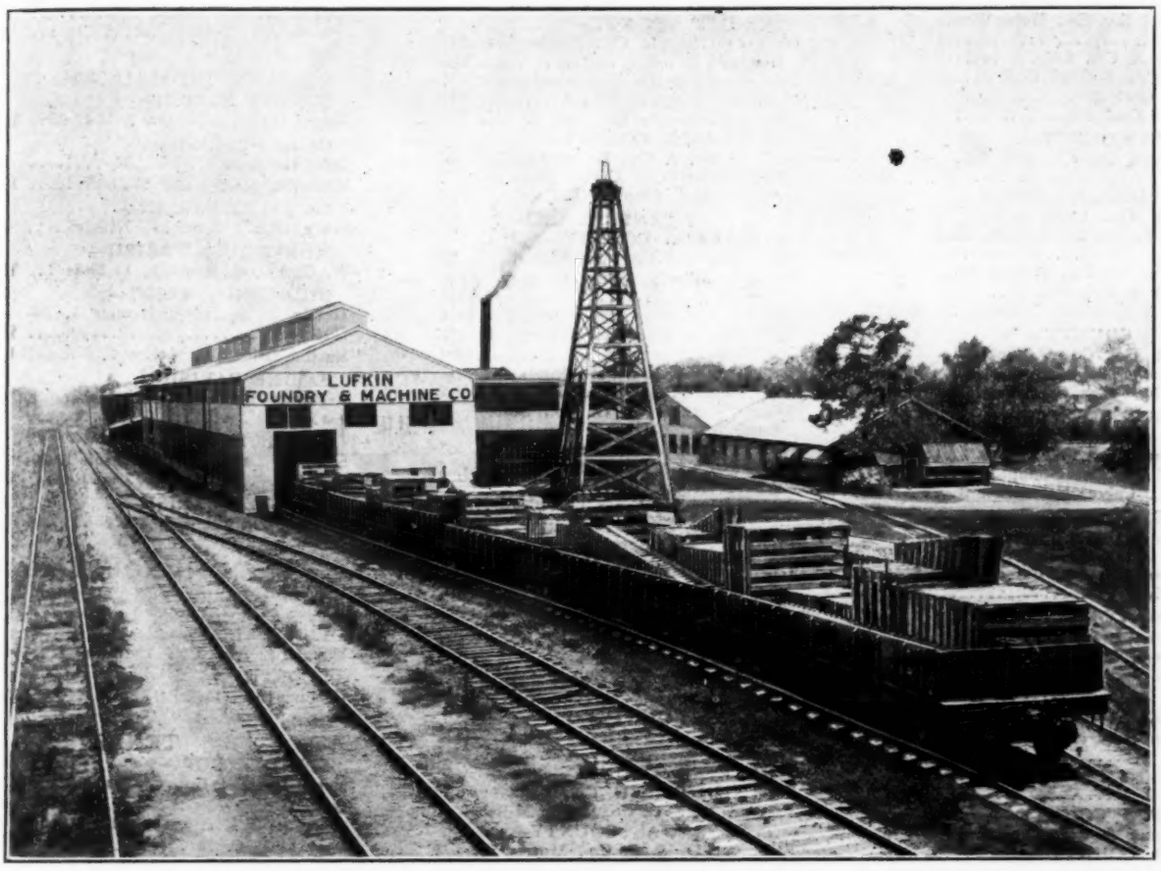
ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
LAWRENCE COUNTY—		
Ohio & Associated Prod. Co., Smith-Neely 38	30	994
Phipps, Blosser & Co., Clark 2	25	985
WABASH COUNTY—		
J. S. Young & Co., Sparks 2	*	1550
Lengelsen, Miller & Co., Lentz 1	*	1850
CLARK COUNTY—		
W. C. McBride Inc., Rush 28	*	1340
T. Stewart & Co., Bailey 6	*	560
EDGAR COUNTY—		
Henderson & Co., Pinnell 1	*	750

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
SAGINAW COUNTY—		
Sun Oil Co., Schoenteit 8	*	2355
Stelzreide 7	15	1847
SHIAWASSEE COUNTY—		
Fordney Pet. Co., Unknown lease 1	*	2380
ALCONA COUNTY—		
Local Interests, Section 12, Haynes Twp. 1	*	2800

BEYOND THE HORIZON-?



The picture above shows six car loads of Lufkin units, crated, loaded, and starting on their way to some foreign oil field—where? To the left of the picture the railroad leads straight on to the horizon—and beyond, but you cannot see further. It is the open road that releases to the world—to the oil fields, wherever they may be, Lufkin equipment. This is just one of many shipments that go steadily out of our plant.

Manufactured at Lufkin, Texas, by

The Lufkin Foundry & Machine Co.

District Offices

Tulsa, Okla. -:- Houston, Texas

Los Angeles, Cal. Eldorado, Ark. New York, N. Y.

Say You Saw it in The OIL WEEKLY

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
BOONE COUNTY—		
Owens Bottle Machine Co., Roach 2	¶¼	....
Godfrey L. Cabot, Erbogast 4	¶½	....
Pittsburgh & W. Va. Gas Co., Seiler 2	*	....
Beiler 14	¶½	....
United Fuel Gas Co., Horse Creek Coal 12	¶½	....
Courtney & Co., 1	¶1½	....
Pure Oil Co., Federal Coal 21	¶1½	....
Federal Coal 25	¶1½	....
Williams Coal 230	10	....
RITCHIE COUNTY—		
Hope Natural Gas Co., Hill 1	90	....
Cain 1	2	....
C. S. Morris & Co., Reymer 1	50	....
Mellon Oil Co., Lewis 1	¶¼	....
Producers Supply & Tool Co., Hammond 5	5	....
South Penn Oil Co., Wilson 10	30	....
J. T. Lock & Co., Hall 2	¶1	....
Sheppard & Rexroad, Thomas 1	¶1¼	....
GILMER COUNTY—		
Hope Nat. Gas Co., Arbuckle 1	¶1¼	....
Unknown 1	¶½	....
Carnegie Nat. Gas Co., Westfall 1	¶1½	....
CALHOUN COUNTY—		
McIntosh & Miller, Minney 1	¶1½	....
Hope Natural Gas Co., Collins 1	¶¾	....
Ohio Fuel Oil Co., Stump 1	¶½	....
Godfrey L. Cabot, Garrettson 3	¶½	....
ROANE COUNTY—		
Morley O. & G. Co., Sergent School lot 1	¶1¼	....
United Fuel Gas Co., Parsons 1	¶1½	....
J. R. Keene 1	¶1¼	....
WETZEL COUNTY—		
Rawe Bros., Leasure 1	*	....
Pittsburgh & W. Va. Gas Co., Ashcraft 11	¶1¼	....
Hoge 2	*	....
MARSHALL COUNTY—		
Consumers Heat & Light Co., Rogers 1	¶2	....
Manufacturers Light & Heat Co., Snyder 1	¶2	....
BRAXTON COUNTY—		
J. F. Pauley & Co., Clowser 1	5	....
TYLER COUNTY—		
Manufacturers Lght & Heat Co., Weekly 1	*	....
WIRT COUNTY—		
Roberts Bros., Rathbone tr 154	2	....
LEWIS COUNTY—		
Carnegie Natural Gas Co., Jackson 1	¶2	....
MINGO COUNTY—		
Public Gas Corp., Logan Cannel Coal 27	¶4	1485
MARION COUNTY—		
Hope Natural Gas Co., Snodderly 1	¶2¼	....
KANAWHA COUNTY—		
United Carbon Co., Osborne 15	¶¼	....
HARRISON COUNTY—		
Conservative Gas Co., Flanagan 1	*	....
WOOD COUNTY—		
B. R. Crippen, Roberts 1	*	....
PLEASANTS COUNTY—		
Thompson & Co., Adams 1	*	....

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
WARREN COUNTY—		
O. J. McGregen & Co., Hunt 1	4	495
FLOYD COUNTY—		
Ivyton O. & G. Co., Martin 1	¶2½	....
JOHNSON-MAGOFFIN COUNTIES—		
Model Oil Co., Prater 3	5	....
MORGAN COUNTY—		
Lewis Oil Corp., Kentucky Cannel Coal 3	2	....
OWSLEY COUNTY—		
Petroleum Explo. Co., Brewer 1	160	....
BUTLER COUNTY—		
Bowling Green Parties, Barton 1	10	....
LEE COUNTY—		
Miller & Cole, Robert Day 4	5	....
ESTILL COUNTY—		
Superior Oil Corp., Alexander 18,19	*	....
A. West & Co. 13	1	....
Campbell 16	1	....
Brenner & Adamas, Spark 6	3	....
OHIO COUNTY—		
Daugherty & Co., Cora Wells 4	250	....
Creek Drilling Co., Lake 9	250	....
Daily & Lowman, Hamilton 1	10	....
White Plains O. & G. Co., Howard 3	*	....
James C. Ellis, Keith 1	10	....
Bartlett 1	15	....
The Ohio Oil Co., McKinley 1	5	....
Lloyd 1	¶1½	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
MORGAN COUNTY—		
Ohio Fuel Supply Co., Newburn 1	¶¼	....
Newburn 2	¶¼	....
Bowman O. & G. Co., Woolman 1	¶½	....
Charles Fox & Co., Fox 1	¶½	....
Ohio Fuel Supply Co., Joy 4	¶½	....
JEFFERSON COUNTY—		
J. E. Turner & Co., Kellerman 11	2	....
WASHINGTON COUNTY—		
Jerry Buckley, Hupp 1	2	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
CUYAHOGA COUNTY—		
East Ohio Gas Co., Mandelkow 1	¶2	....
Hulse & Kundtz, Skoba 1	¶1¼	....
Barrow 1	¶1½	....
Daugherty & Dempsey, Austin 2	¶4¾	....
Empire G. & Fuel Co., Whitney 1	¶1½	....
Goff Bros., Schraf 1	¶1¼	....
ATHENS COUNTY—		
West Farm O. & G. Co., Gibson 1	2	....
Athens State O. & G. Co., State Land 7	5	....
Wehrle Interests, Mulligan 1	*	....
Gross & Co., Maxwell 1	1	....
ASHLAND COUNTY—		
Logan Gas Co., Craig 1	¶¼	....
Shaw 1	*	....
Ringler & Co., Sprott 1	¶1½	....
The Kemrow Co., A. G. Meiser 1	*	....
MEDINA COUNTY—		
E. R. Edson Jr. Son Co., Wertz 29	2	378
Wertz 30	2	380
Logan Gas Co., Reusch 1	¶¼	....
LORAIN COUNTY—		
Ohio Fuel Gas Co., Tyson 1	¶½	....
Grabenstetter 1	¶1	....
WAYNE COUNTY—		
M. C. & G. K. Rogers, Poots 1	¶1½	....
Harmon & George, Myers 2	¶2½	....
HOCKING COUNTY—		
Twin Hills O. & G. Co., Lane 1	*	....
Flesboro O. & G. Co., Byron Mills 1	*	....
TUSCARAWAS COUNTY—		
Stillwater O. & G. Co., Morris 5	3	....
LICKING COUNTY—		
E. J. Edmons & Co., Williams 3	2	....
COSHOCTON COUNTY—		
East Ohio Gas Co., Nyhart 3	¶4	....

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
HARDIN COUNTY—		
Roundhead O. & G. Co., Austine 3	30	1520
H. E. Schmidt, Hites 8	15	1502
SENECA COUNTY—		
Stipio Oil Co., Allen 1	*	2144
Shaul & Geyer, Shaul 1	*	1693
AUGLAIZE COUNTY—		
W. B. Lawrence & Co., Dayton Fast 5	15	1172
ALLEN COUNTY—		
W. W. Botz & Co., Landers 1	10	1350
SANDUSKY COUNTY—		
W. C. Richards, Hetrick 12	6	1347
WOOD COUNTY—		
Hoffman & Co., Ketter 2	*	1284
OTTAWA COUNTY—		
The Ohio Oil Co., Block 1	*	2090

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
BALDWIN HILLS-INGLEWOOD—		
Standard, Baldwin-Cinega 45	200	2068
BREA-OLINDA—		
Shell Co., Orange 10	250	5312
CAT CANYON—		
R. & G. Oil Co.	400	3220
KERN FRONT—		
General Pet. Corp., Wetmore 13, 14-28-27	175	2025
Petroleum Securities Co., Robinson A5, 22-28-27	300	2495
SEAL BEACH—		
Aitken et al, No. 1	800	5485
Pet. Securities Co., Gieck 1	300	5360
Ring Pet. Co., No. 1	1500	5457
Union Pet. & Drlg. Co., McCaslin 2	1800	5512
California Eastern Oil Co., Horowitz 1, wo	900	5420
Judson 4, wo	300	5369
Pet. Securities Co., Bryant A-1, wo	500	5450
Superior Oil Co., Horowitz 1, wo	800	5490

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
NEVADA COUNTY—		
J. J. O'Brien, Moss B-12, 1-14-21	125	1177
UNION COUNTY—		
Magnolia, Murphy 3, 8-16-15	¶3½	2693
Southern Crude Oil Purchasing Co., Lyall B-7, 3-16-15	8	2602
Wells A-5, 15-16-15	5	2594

LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
Simms Oil Co., Dodson 2, 15-23-12	¶20	3081
CADDO PARISH—		
Gulf, Herndon 10, 15-21-15	25	2709
Magnolia, Raines 26, 22-21-15	100	2845
LA SALLE PARISH—		
Bruce Hunt, Urania 5, 7-10-2e	40	1519
MOREHOUSE PARISH—		
W. C. Feazel, Faulk 1, 15-20-4e	¶31	2143
RICHLAND PARISH—		
Moody & Seagrave, Hemler 1, 20-16-6e	¶14	2418
Ruston Drlg. Co., McCoy 2, 8-16-6e	¶14½	2418
SABINE PARISH—		
Arkansas Fuel Oil Co., Nabors 1, 30-10-12	¶3	3500
UNION PARISH—		
Southern Carbon Co., Jackson 1, 20-20-4e	¶10	2159
WEBSTER PARISH—		
Magnolia, Branton 2, 6-22-9	¶8	2611

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
VINTON—		
Vinton Pet. Co., Rescue 7	300	3000
EVANGELINE—		
Yount-Lee Oil Co., Latrielle 1	*	3050
LOCKPORT—		
Vacuum-Gulf, Miller 17	1100	4400

TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
SPINDLE TOP—		
Yount-Lee Oil Co., Gladys 41	1200	2900
Gulf, Gladys 226	150	750
Oakwood Realty Co. 12	90	5575
Sun, McLean 14	3500	5800
BATSON—		
Paraffine Oil Co., Paraffine 70	*	1130
PIERCE JUNCTION—		
Rio Bravo Oil Co., Settegast 6-A	400	3600
Bender 2	200	3600
Cullen et al, Howe 3	2500	4848

EAST TEXAS

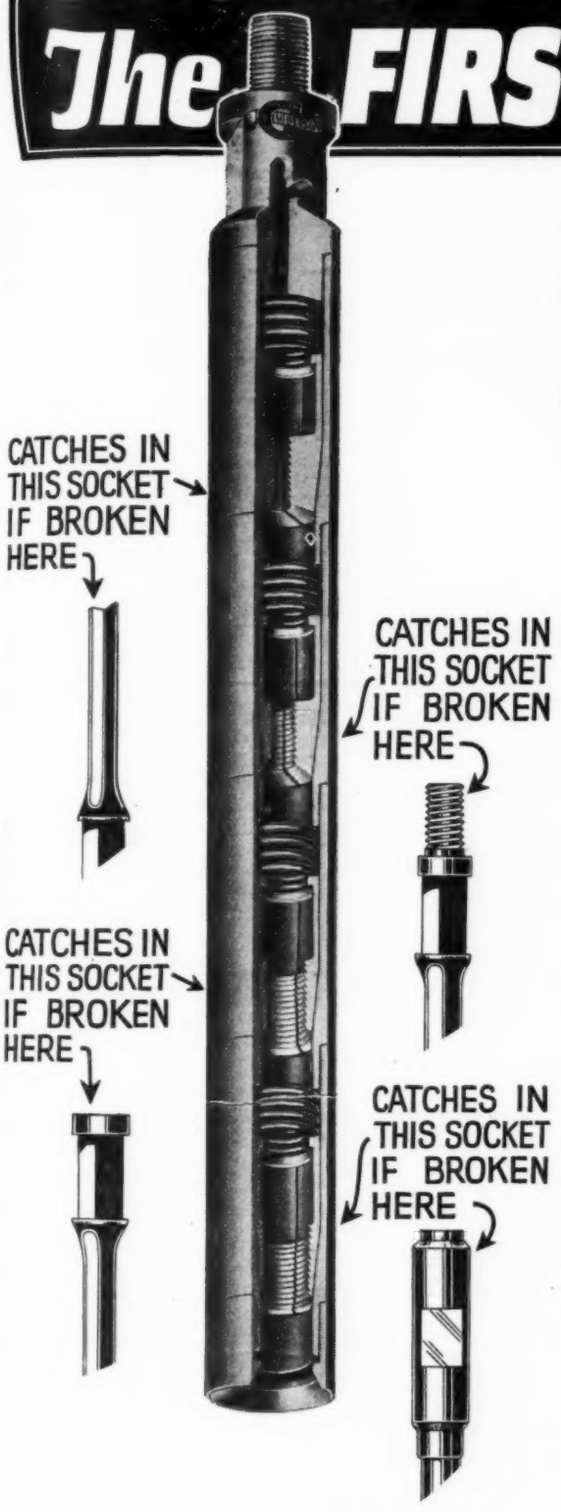
Company, Well and Location	Initial Production Bbls.	Depth
HARRISON COUNTY—		
J. R. Bahan, Furrh 3, J. Short sur	¶6	999
State Line O. & G. Co., Taylor 3 T. D. Wilson sur No. 778	¶6	1969

CENTRAL WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BROWN COUNTY—		
Adamson & Bearman et al, Miller 1	¶2	1167
Cranfill-Reynolds & Sun Oil Co., Smith 6	450	1338
Smith 8	25	1355
Smith 11	30	1336
Forest Oil Corp., Smith 11	55	1341
Gulman-McMurray et al, Teston 16	50	1232
J. K. Hughes Dev. Co., Gilbreath 1-B	*	1329
Humble, Gilbreath 2	385	1333
Gilbretah 3	210	1312
Kone Prod. Co., Hickman 2	100	1225
Roxana, Smith 15	*	1355
Smith 20	175	1329
Smith 23	80	1333
Selby O. & G. Co., Ellis 17	100	1335
Sinclair, Smith 3	80	1326
The Texas Co., Hickman 23	55	1210
Tower-McKanna Inc., Edmondson 1	*	1355
Valley Oil Co., Teston 7	30	1262
CALLAHAN COUNTY—		
Roxana, Swafford 1	40	1674
COLEMAN COUNTY—		
Foster et al, Godwin 1	*	935
Hart et al, Coleman County Fee 1	*	1080
Harris-Mitchell et al, Norwood 1	*	1709
Hoffman-Page et al, Cole 1	*	1605
Ilsing Prod. Co., Harris 2	¶10	1678
Urban et al, Gray 1, (Sec. 174)	*	3318

Catches Any Broken Rod The FIRST TRIP DOWN

Saves Time, Labor and Lost Production!


CATCHES IN THIS SOCKET IF BROKEN HERE
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The GUIBERSON Multiple Sucker Rod Socket runs into the well, at one time, all necessary sizes of bowls and slips to take hold of any diameter of the broken rod. This insures getting the rod on the first trip. It eliminates feeling around with the wrong sized slips—saves pulling out to change slips—thus reduces to a minimum the time, labor and lost production resulting from broken sucker rods.

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GUIBERSON

BETTER BE SAFE THAN SORRY

Say You Saw it in The OIL WEEKLY

Company, Well and Location	Initial Production Bbls.	Depth
EASTLAND COUNTY—		
Belva Oil Co., Good 2	285	3801
Mook-Texas Oil Co., Sibley 7	*	3072
States Oil Corp., Sibley 3	80	3120
T. P. Coal & Oil Co., J. C. Swift 1	10	3063
Vacuum, Cochran 1	*	3050
STEPHENS COUNTY—		
Payne et al, Tipton 1	*	1215
TEXAS PANHANDLE		
GRAY COUNTY—		
Danciger O. & R. Co. et al, W. Jackson 1	2000	3043
Delaney et al W. Jackson 1	4800	2985
Gibson Oil Corp., J. B. Bowers 1	1400	3122
Gray County Pet. Co., W. L. Herndon 1	*	3650
Pollard & Pollard, J. B. Bowers 1, shot twice	175	3208
HUTCHINSON COUNTY—		
Currie-Holmes et al, Smith 1, shot	200	2870
Great West Pet. Co., T. D. Lewis 1, shot	100	3116
Prairie O. & G. Co., Sanford 2	55	2981
J. D. Ward et al, Smith 1	*	3900
WHEELER COUNTY—		
Angus et al, Vermillion 1	18	2139
Lyons et al, J. H. Jackson 1	100	2304
NORTH TEXAS DISTRICT		
ARCHER COUNTY—		
Barkley-Meadows & Carter, Andrews 1	*	1159
Republic Prod. Co., Duggan 1	*	1553
Duggan et al, Jones 1	*	3075
Magnolia, Andress 2	1½	1170
Oil Operators Trust, Koelzer 4	55	1666
Luke 2	40	1663
Sowell Bros. et al, Schmitz 2	10	1701
The Texas Co., Hacker 2	35	1612
HASKELL COUNTY—		
Mariand & Texon Oil & Land Co., Clark 1	*	2503
JACK COUNTY—		
Buttram Pet. Co., Gaskin 1	*	4673
Williams 1	*	3208
Madden & Hunt, Sloan 2	10	525
Tedford Bros. et al, Richards-Lanier 1	10	495
Richards-Lanier 2	13	494
K-M-A AND IOWA PARK—		
Duncan White et al, Nitschke 3	15	747
KNOX COUNTY—		
The Texas Co., Bowden 1	*	2245
MONTAGUE COUNTY——		
Gulf, Loy 1	10	835
Bridwell-Heydrick & Continental Oil Co., McGaughy 3	95	1613
SOUTH VERNON DISTRICT—		
Phillips Pet. Co., Waggoner 6-JJ	45	2457
YOUNG COUNTY—		
Coones & Hotchkiss, Scott 1	25	4455
G. A. Gifford et al, Rutherford 1	*	840
Goldsmith et al, Freeman 1	*	1030
Phillips Pet. Co., Whittenburg 2	50	3925
Reed et al, Parkinson 1	*	2260
Robert Oil Corp., Grisham 3-B	25	820
WEST TEXAS		
CRANE COUNTY—		
Simms-Atlantic, University 4-D	1020	2950
Tidal et al, University 5-1	950	2932
WINKLER COUNTY—		
Landreth & Roxana, Grisham-Hunter 1	1600	2900
EAST CENTRAL TEXAS		
CEDAR CREEK—		
Reiter-Lewis & Moutray Oil Co., Ward 2	275	2890
Lewis 1	325	2902
Transcontinental Oil Co., Lewis 1	200	2900
Ward 1	225	2900
Why Not Oil Co. et al, Lewis 1	200	2896
Rycade Oil Corp., Ward 1	*	2950
SOUTHWEST TEXAS		
DALE—		
The Texas Co., Beaty B-1	*	2690
Humble, Clingingsmith 1	12	2250
Clingingsmith 2	10	2110
JIM HOGG COUNTY—		
Magnolia, Merchant State Bank 28	50	1249
WEBB COUNTY—		
Magnolia, Garcia 9	10	1561
Moody Corp., No. 2, Blk 10, sec 291	20	1265

PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week Ending Oct. 7	Previous Week	Total This Month	Total This Year	This Week Last Year	This Month 1926	Total Same Date 1926	Year Total 1926
Arkansas	6	5	6	282	15	15	962	910
California	16	16	16	995	30	30	1,264	1,293
Louisiana	8	21	8	565	13	13	1,162	1,318
Kansas	8	15	8	760	31	31	1,565	1,745
Oklahoma	28	50	28	3,118	63	63	4,283	5,165
Texas	109	138	109	7,278	276	276	10,546	12,158
Mountain States	...	...	...	362	24	24	652	...
Total	175	245	175	13,360	452	452	19,969	*22,589

*Does not include Mountain States.

ARKANSAS

NEVADA COUNTY—Humble, Fairchild 2, 6-14-20, 250 ft n and 925 ft e of sw c sw nw. McDonald et al, Pell 1, 9-15-22, 150 ft n and 150 ft w of se c sw sw. J. J. O'Brien, Moss A-5, 1-14-21, 150 ft s and 660 ft w of ne c sw se. J. J. O'Brien, Moss B-9, 1-14-21, 510 ft n and 150 ft w of se c nw se.

UNION COUNTY—Smitserman & McDonald, Saxon A-2 (o. w. d.) 32-15-16, 200 ft s and 200 ft e of nw c se sw. Standard, Murphy 33, o. w. d., 4-16-15, 1325 ft n and 650 ft e of sw c.

LOUISIANA

BIENVILLE PARISH — Lake Bisteneau Gas Company, Lake Charles, State Land 1, 16-16n-10w, 1320 ft s and 1320 ft w of nec se.

BOSSIER PARISH—O'Brien Bros., Inc., et al, Shreveport, Dodson 1, 22-23n-12w, 495 ft s and 660 ft w of nec nw.

CADDO PARISH—Greenwood Prod. Co. and C. H. Lyons, Shreveport, Agurs 3, 6-16n-16w, 1310 ft s and 435 ft e of nwc. W. O. Souther, Jr., Standish Oil & Ref. Co., Boston, Mass., Jolly 1, 22-22n-15w, 520 ft w and 150 ft n of se cor of sec.

CAMERON PARISH—Lousiana Land & Exploration Co., New Orleans, Calcasieu Lake A-1, 1-14s-9w, 8803 ft w and 3182 ft n from nec.

IBERIA PARISH—Louisiana Land & Exploration Co., Houston, Texas, Vermillion Bay A-1, 29-15s-6e, 3872 ft n 30 degrees from Shell Island located s 42 degrees 16896 minutes from a point 2376 ft s and 4424 ft w from nec in sec 29.

OUACHITA PARISH—Imperial O. & G. Products Co., Monroe, L. W. Stubbs 2, 13-19n-3e.

RED RIVER PARISH—C. E. Simmons & Co., Fort Worth, Texas, Neeley 2, 1-14n-12w, 650 ft e and 50 ft s of nwc se sw.

OKLAHOMA

CREEK COUNTY — Mid-Continent Pet. Corp., F. Harjo 1, swc ne ne, 18-14-10. Independent O. & G. Co., Wolfe 2, nec sw ne, 18-14-10. The Texas Co., Strip 1, sec ne, 2-16-11. Murta & Cole, Froe 1, nec sw 35-16-10. Jackson & Wise, Thomas 2, sec sw nw, 13-17-10. Sinclair O. & G. Co., Long 2, swc 9-18-7.

KAY COUNTY—Larutan Fuel Co., A. Woods 3, sec ne nw 30-27-1.

MUSKOGEE COUNTY—J. W. Hale et al, Kell 1, nec nw 7-14-19; Timberlake 2, ne sw se 6-14-19. Link Oil Co., W. Austin 2, cel se ne, 32-15-15.

OKMULGEE COUNTY — G. T. Roberts, Belisle 4, cnl se se 16-15-11. Sheldon Oil Co. et al, Skelton 3, cnl sw se 15-13-12.

OSAGE COUNTY — A. D. McDonnell 1, swc se se sw 6-21-9. Oklahoma Natural Gas Co. 775, sec 6-21-12. M. & T. Oil Co. 4, sec sw sw 34-23-9. I. T. I. O. Co., 51, cel nw, 25-26-11; 100, nwc se ne 27-27-10. Simon et al 4, nwc se nw nw, 31-29-12.

PONTOTOC COUNTY—W. R. Ramsey, Milner 1B, nw ne 17-5-8; Patterson 1A, nw sw sw 20-5-8; Patterson 1-B, ne nw nw 29-5-8; Butler 1B, nec 30-5-8.

SEMINOLE COUNTY—Producers & Refiners Corp., Dungan 3, ne nw se 35-8-6. Independent O. & G. Co. and Amerada Pet. Corp., J. Hill 2, nw ne ne 7-9-8. Gypsy Oil Co., B. Carter 12, se nw nw, 11-9-5. Independent O. & G. Co., Sullivan 5, sec ne 10-9-5.

WAGONER COUNTY—Baldridge et al, L. Childers 1, swc n w22-18-17. A. Chapman, Colbert 2, swc ne se 19-18-18.

KANSAS

COWLEY COUNTY—Roth & Faurot, Bailey 1, c nw se 5-35-5. Boggs Drilling Co., Henderson 1, c ne nw 5 35 5.

ELK COUNTY—Conley et al, Mullen 1, nwc sw sw 3-30-9.

GREENWOOD COUNTY—Montgomery et al Long 1, sec 33-24-10.

MARION COUNTY—Harwood & Winters, McNicols 1, nwc ne se 15-17-4.

ROOKS COUNTY—Streeter & Stearns, Mattison 1, nw 28-10-16.

SUMNER COUNTY—Roxana Pet. Corp., Jenkins 1, nec se 26-31-2; Wanrich 3, c e l ne nw 36-31-2.

TEXAS

ARCHER COUNTY—Sun, Dallas, Andrews 2, R. R. Rainey sur, 150 ft from w and 454 ft from s line. Roy I. Carter, Wichita Falls, Andrews 1, blk 3, G. C. Frarley sur, 150 ft from n and 450 ft from w line.

BROWN COUNTY—Stock & Love, Cisco, Graham 1, J. Brown sur, 150 ft from n and w lines. Humble, Cisco, Gilbreath 4, R. F. Debord sur, 150 ft from n and 161 ft from w line, 5, 301 ft s of No. 4; Hickman 23, T. Benson sur, 300 ft n of 22; Armstrong 12, J. Delgado sur, 300 ft w of No. 11. Roxana, South Bend, Smith 24, S 1, blk X, SA&MG sur, 150 ft from e and 503 ft from s line.

Phillips, Bartlesville, Okla., Newsom 6, S 4, SA&MG sur, 743 ft from n and 162 ft from w line. A. A. Cameron et al, Brownwood, King 1, W. W. Williams sur, 150 ft from n and w lines. Humble, Cisco, Hickman 22, T. Benson sur, 150 ft from s and w lines; Armstrong 11, J. Delgado sur, 150 ft from n and 750 ft from w line. Kone Prod. Co., Cisco; Hickman o, T. Benson sur, 300 ft w of 2. J. K. Hughes Dev. Co., Mexia, Gilbreath 2, SA&MG sur, 300 ft w of 1. Southern States G. & F. Co., Brownwoodw, Newton 3, S 18, G. Hunt sur, 150 ft from n and w lines. Amerada, Cisco, Gilbreath 1, SA&MG sur No. 4, 150 ft from w and 162 ft from s line. T. B. Longre, Brownwood, McDonald 1, F. Hunt sur, 450 ft from w and 150 ft from s line.

CALLAHAN COUNTY — Harve Loomis, Baird, Smart 2, S 44, D&D Asy sur, 150 ft from s nad w lines. Russell, Lankford & Greathouse, Baird, Park 1, 3194, TE&L sur, 300 ft ne of No. 1. Andrews Pet. Corp., San Antonio, Dunaway 8, 3168, TE&L sur, 275 ft e of No. 6.

COLEMAN COUNTY—Tower & McKanna, Inc., Wichita Falls, Hassard 1, S 57, blk 7, 150 ft from n and e lines. Kenwood Oil Corp., Fort Worth, Word 1, No. 274, Wm. Eckles sur, center.

COOKE COUNTY — P. R. Harris, Fort Worth, Lewis 1, J. Sadler sur, 450 ft from n and 150 ft from w line.

CROCKETT COUNTY—J. S. Cosden, Inc., Fort Worth, Perner 1, S 36, blk 2, I&GN sur, 330 ft from s and w lines.

CHAMBERS COUNTY—R. P. Bartlett et al Mt. Belvieu, Fisher 1, Wm. Bloodgood sur, 50 ft w of center of e line. S. J. Hindman, Houston, Fisher 1, Wm. Bloodgood sur, 650 ft from e and 625 ft from s line.

CALDWELL COUNTY—Magnolia, Dallas, Branyon 6, J. Berry sur, 425 ft ne of No. 5; Rios 18, J. Henry sur, 150 ft from s and w lines; 19, ne corner. Sun Oil Co., Dallas, Talley 3, W. C. Swearingen sur, 600 ft ne of No. 2; 6, 660 ft e of No. 3.

EASTLAND COUNTY — Mook-Texas Oil Co., Fort Worth, Casey B1, 850 ft from n and 1220 ft from w line. L. Teatsworth et al, Eastland, Hargus 2, J. House sur, 350 ft from n and 400 ft from e line. J. M. Gohlson et al, Ranger, Powell 1, S. Dooley sur, 2118 ft from n and 342 ft from w line. R. H. Lightfoot, Fort Worth, Earnest 2, S 3, blk 4, H&TC sur, 330 ft sw of No. 1. Atwood & Hannold, Ranger, Gullett 1, blk 66, McL. C. S. L. 160 ft from e and 150 ft from s line.

FORT BEND COUNTY—J. S. Abercrombie Co., Houston, Robinson 4, blk 5, Hicks-Shropshire sur, 150 ft n of No. 1; West-Schneck 4, T. Hobermaker sur, 50 ft from n and 550 ft from e line.

FLOYD COUNTY—Hoffer Oil Corp., Ft. Worth, Nelson 1, S 34, GWT&P sur, 330 ft e of center of w line.

GUADALUPE COUNTY—O. J. Muelder, Seguin, Rosebrock 3, Duran sur, 1000 ft from n and 480 ft from w line.

GONZALES COUNTY — J. B. Dunning, Gonzales, Wilkerson 1, R. Ward sur, 750 ft e of center of w line.

HOWARD COUNTY—H. D. Riggs, Stanton, Roberts 2B, S 156, blk 29, W&NW sur, 150 ft from n and w lines. Group 1 & Marland Oil Co., Big Lake, Settles 1A, S 134, blk 29, W&NW sur, 1320 ft from s and w lines.

HALE COUNTY—W. H. B. Gonedy, Plainview, Kittrell 1, S 65, blk A3, R. M. Thompson sur, 550 ft from s and 500 ft from e line.

HARRISON COUNTY — Simms Oil Co., Dallas, Abney 2, J. Bryant sur, 625 ft from e and 700 ft from s line. State Line O. & G. Co., Shreveport, Isaacs 1, E. Little sur, 900 ft from n and 525 ft from e line.

HARRIS COUNTY — J. R. Everett, Sour Lake, Eagle 2, H. G. King sur, 50 ft from n and 60 ft from w line.

HARDIN COUNTY—East Batson Oil Co., Batson, Fee 5, F. H. Green sur, 196 ft from n and 60 ft from e line.

HUTCHINSON COUNTY — Atlantic & Grimes, Dallas, Johnson 1, S 22, blk Y, M&C sur, 150 ft s of center of n line.

JEFFERSON COUNTY—Freeport Sulphur Co., Freeport, Fee 688, blk H1, S. Eaton sur, center. Yount-Lee Oil Co., Beaumont, McFaddin 45, blk 1, P. Humphreys sur, 789 ft from e and 689 ft from n line.

JACK COUNTY — Tedspan O. & G. Co., Wichita Falls, Richards 3, blk 4, BBB&C sur, 300 ft n of No. 2. Tedford Bros., Wichita Falls, Richards 1, blk 4, BB&C sur, 490 ft from w and 190 ft from s line.

JASPER COUNTY—S. S. Raymond, Jasper, Kountze 1, J. Conn sur, 1670 ft from w and 1248 ft from s line.

JIM HOGG COUNTY—Magnolia, Dallas Merchants Bank 29, No. 415, F. M. Brister sur, 400 ft se of No. 27.

LIMESTONE COUNTY—Transcontinental Oil Co., Mexia, Lewis 2, P. Varela sur, 300 ft n of No. 1.

LUBBOCK COUNTY — Talbot & Simms, Plainview, Ellwood 1, S 14, blk B, R. M. Thompson sur, 200 ft from n and e lines.

MILAM COUNTY—J. W. Kemp, Cameron, Jacob 1, J. Neal sur, 150 ft e of center of w line; Rettig 1, T. J. Chambers sur, 250 ft s of cente rof n line. Lowenstein Oil Co., Rockdale, Lowenstein 2, Wm. Allen sur, 150 ft from n and w lines; 3, 300 ft sw of No. 1.

MENARD COUNTY — Bartlett & Drake, Brownwood, Callan 1, BS&F sur, 300 ft from s and e lines.

MADISON COUNTY—W. B. Kyle, Normangee, Hibbitts 1, J. Woodru¾, w central.

McCULLOCH COUNTY — VanBebber & Lehman, Mercury, Eubank 12, S 45, 1200 ft from w and 1800 ft from s line, 13, 300 ft s of No. 12.

PALO PINTO COUNTY — T. G. Shaw, Fort Worth, Gilbert 1, 500 ft from w and 300 ft from s line. P. K. French, Fort Worth, Taylor 1, S 21, blk 1, T&P sur, 150 ft from n and e lines.

PECOS COUNTY — Kirby Pet. Co., San Angelo, Turney 1, S 11, blk 140, T&St. L. sur, 200 ft from n and w lines. Allsman & Bell, McCamey, Pecos River 3, blk 1, I&GN sur, n of No. 1. Mid-Kansas O. & G. Co., Tulsa, Okla., Yates 5, S 61, blk 1, I&GN sur, 810 ft from s and e lines; 4, 150 ft from e and 471 ft from s line; 6, 1372 ft from n and 1220 ft from e line.

POLK COUNTY—Toner & Purdy, Houston, Roberts 1, J. de Rymayor sur, nw corner.

PANOLA COUNTY — Magnolia, Dallas, Estes 2, B. Lovell sur, nw corner; Davenport 3, J. Dunlap sur, s central.

RUNNELS COUNTY — Kenwood Oil Co., Fort Worth, Talley 1, J. C. McKean sur, 900 ft e of center of w line.

SHACKELFORD COUNTY—L. M. Patterson, Moran, Broyles 1, S 16, L. A. L. sur, 150 ft from n and 370 ft fro me line. Scott & Walker, Albany, Huskey 15, 548, TE&L sur, 150 ft from n and e lines. Loggie & Arendt Oil Co., Albany, Blach 15, 507, TE&L sur, center. T. G. Shaw, Fort Worth, Edgar 6, S 20, Bayland Asy. sur, 300 ft n of No. 5; 5, 150 ft from s and e lines.

STEPHENS COUNTY — Adamson & Brahaney, Ranger, Bradford 1, S 66, blk 6, T&P sur, 950 ft from n and 150 ft from w line.

UVALDE COUNTY—Pure Oil Co., Mexia, Smyth 1, S 681, GC&SF Ry sur, 2065 ft from n and 2380 ft from e line.

UPTON COUNTY—O. H. Shoup, Jr., Colorado Springs, Co., University 1, S 10, blk 5, 330 ft from s and e lines.

WICHITA COUNTY — B. W. Womack, Wichita Falls, Roediger 1, S 2, C. T. Ry. sur, 466 ft from n and 670 ft from e line. Fisher & Gilliland, Wichita Falls, Fee 8, Kepler sur, 200 ft from n and w lines. W. T. Waggoner-Texas Co., Wichita Falls, Fee 335, GC&SF sur, sw corner, 333, ne corner; 334, 1650 ft from w and 2515 ft from s line. Craig Bros., Fort Worth, Denny 2, Coward sur, nw corner.

WINKLER COUNTY—Atlantic Oil Prod. Co., Dallas, T. G. Hendrick 2, S 34, blk B5, School sur, 330 ft from s and e lines. Roxana, South Bend, Hendricks D1, S 41, blk B5, School sur, 330 ft from s and w line; Hendricks C1, S 29, 330 ft from n and e lines. Marland, Fort Worth, Hendricks 3, S 35, blk B5, School sur, 330 ft from n and e lines.

WEBB COUNTY—Magnolia, Dallas, Garcie 10, No. 58, J. Whittig sur, 400 ft sw of No. 1.

WHARTON COUNTY—Geo. Hyde, Houston, Banker 6, S. F. Austin sur, 60 ft from ne and 130 ft from se line.

YOUNG COUNTY—Nash & Windfohr Oil Corp., Graham, Hinson 1, P. Pier sur, 250 ft from e and 200 ft from s line. Goldsmith & Cooper, Olney, Freeman 1, blk 169, TE&L sur, 450 ft from n and 150 ft from e line. Wichita Prod. Co., Wichita Falls, Hamilton 1, 1809, TE&L sur, 200 ft from n and 180 ft from w line. Seaboard O. & G. Co., Wichita Falls, Ferguson 2, S 36, J. W. Manning sur, 200 ft from e and 230 ft from s line. Lindsay & Bolin, Graham, Graham 1, E. H. Ross sur, 155 ft from s and w lines. G. C. Williams, Jean, Casey 1, 1906, TE&L sur, se corner. Pitzer & West Breckenridge, Graham 1, P. Pier sur, 100 ft from n and e lines. Park Pet. Corp., Wichita Falls, Prideaux 5, A. Rohus sur, 150 ft from n and w lines. Wooten & Reed, Graham, Spear 1, S. Tynes sur, 150 ft from n and e lines. Roxana, South Bend, Ford 12, W. T. Carter sur.

CALIFORNIA

BREA-OLINDA—Shell Co., Orange 14, 2-3-10.

COLUSA COUNTY—The Numa Oil Co. 1, 19-15-2.

KERN COUNTY — Pacific Eastern Prod. Co., Fruitvale 1, 21-29-27.

KERN FRONT—Standard Oil Co. 12, 27-28-27.

LONG BEACH—A. S. Johnston Drilling Co. 1, 29-4-12. McKeon Drilling Co., Inc., 1, 19-4-12. Shell Co., Alamitos 24, 29-4-12. George W. Johnson Crest 3, 29-4-12.

LOS ANGELES COUNTY—J. E. O'Donnell 61, 29-3-14.

MT. POSO—Superior Oil Co. Glide 1, 13-27-28.

SANTA FE SPRINGS—Standard, So. Whittier Comm. 20, 5-3-11.

SEAL BEACH—Standard, San Gabriel 14A, 3-5-12.

SOUTH MOUNTAIN—Oak Ridge Oil Co., Willard 23, 18-3-20.

TEMBLOR—J. F. Harrison & Co. 3, 36-29-20.

VENTURA—Shell Co., Gosnell 25, 28-3-23; Taylor 24, 28-3-23.

Pontotoc Wildcat Test Shows Possibilities

Tulsa.—L. A. Gillespie's Choate 1 wildcat test in the southeast of the southwest of the southeast of section 12-5-4, northwestern Pontotoc County, offered possibilities late last week of opening a pool in the close proximity of the Seminole area, and held the attention of every company with acreage in the vicinity. It picked up a showing of oil at 2817 feet, which is considered probably coming from the Wilcox sand. Pipe was being set at the close of the week to close off water in the hole for a better chance to test the show.

The Choate 1 has attracted considerable attention since encountering a water sand at 1775 feet and again at 2043-54 feet, the latter of which showed 50 barrels of fluid carrying a heavy oil percentage. A third water sand at 2700 feet bailed eight barrels an hour.

Plan Twenty Gas Wells

Bartlesville, Okla.—Harris & Haun, independent operators of Blackwell, plan to drill 20 gas wells in the Blackwell district of northern Kay County, following the signing of a two year contract to supply natural gas for the Bartlesville Zinc Company smelter at Blackwell. The contract carries with it the privilege for renewal for three years.

WILDCATS FROM ALL SECTIONS

MOUNTAIN STATES

MONTANA

BEAVERHEAD COUNTY — Crowley Oil Co.'s Crowley Dome 1, ne 2-7s-10w, rig.

BIG HORN COUNTY—Burton Wood et al's Jones 1, 28-1n-31e; rig Burton Wood et al's Kelly 1, 13-1s-31e, rig.

BLAINE COUNTY—Cassady-Nichols, ne 29-34-18e, location.

CARBON COUNTY—Ohio Oil Co.'s Northern Pacific 1, 11-7s-21e, undrr at 2380 ft. Book et al's Moore 1, 13-17-23, bottom at 850 ft, waiting for supplies.

CHOUTEAU COUNTY — Northfield Oil Co.'s Reliance 1, ne 20-26-4e, abn. Dilling et al's ne 9-25-1e, drilling at 300 ft. Fidelity Oil Co.'s 1, 15-25-1e, drg 200 ft.

FERGUS COUNTY—Winnett Drilling Co.'s Winnett 1, sw 6-14n-27e, rig up. Rowland et al's Black Butte 1, 13-17-23e, drilling below 1000 ft.

FLATHEAD COUNTY—Flathead Pet. Co.'s Reservation 1, sw 35-23-22w, rig.

GLACIER COUNTY—Rim Rock Oil Co.'s 29-35-5w, rig.

HILL COUNTY—Gad-Hamilton et al, sw 15-30-13e, sp. Gad Hamilton et al's Goldstone I, sw 25-36-9e, rig. Equitable Oil Co.'s Perkins 1, 34-33-12e, dr 2800 ft.

LIBERTY COUNTY—Chester Oils, Inc., Laird 1, 31-27n-6e, dr at 800 ft. Patterson et al's Elmer Brown 1, 19-37n-4e, dr 1800 ft. Sunburst O. & R. Co.'s Disotell 1, 10-37n-5e, dr 1400 ft.

MUSSELLSHELL COUNTY—Harte et al's ne 24-7-24e, lcn. McElwain Oil Dev. Assn. 1, 2-1122-e, rig up.

RICHLAND COUNTY — Community Drill Co.'s Pioneer 1, rigging to drill deeper from 2600 ft.

ROOSEVELT COUNTY—Pioneer O. & G. Co.'s 1, se 35-27-51e, sd at 1590 ft.

PONDERA COUNTY — Mutual Drlg. Co., 5-27-3w, drilling. S. C. Ferdig et al's 1, 8-27-4w, rig up.

PHILLIPS COUNTY—Big Dome Oil Co.'s Bloomberg 1, ne ne 1-32-32e, rig.

SWEETGRASS COUNTY—Shoshone Consolidated Oil Co.'s nw 23-15e, drilling.

TETON COUNTY—J. W. Elliott et al, 1-25-1w, running 6-in at 1390 ft. Homestake Exploration Corp.'s Acme 1, 20-25-1w, dr 600 ft. S. C. Ferdig et al, 12-25-1w, dr 600 ft. California Pet. Corp.'s Johnson 1, 20-26n-1e, rigging up.

TOOLE COUNTY—Kevin-Flathead Oil Co.'s Toole 1, ne 27-36n-23, sd at 2200 ft. Zenith-McDonald's Lowey 1, 25-36n-1w, sd 177 ft. Montana-Pacific Oil Co.'s Clarks 1, se 20-37-1e, dr at 1705 ft. Sunburst O. & G. Co.'s Grandview 1, 10-34n-3e, rig. Commonwealth Pet. Co.'s Benjamin 1, 22-31-2e, dr at 1100 ft. Madeline Oil Co.'s Swanson 1, 33-35-4w, rig.

WHEATLAND COUNTY—Churchwell-Martin et al, se 35-7n-13e, abd.

YELLOWSTONE COUNTY—Neudigate Oil Co.'s Happy Hollow 1, nw nw 25-1s-24e, rig up.

WYOMING

BIG HORN COUNTY—Agate Oil Co., ne 13-51-93, dr.

CARBON COUNTY—Graybeal Synd., 16-28-91, wtg rotary machine, td 4000 ft. Pacific-American Oil Co., 31-25-91w, lcn.

CONVERSE COUNTY—A. A. Tylee, ne 8-32-72, rig. Criterion Oil Co.'s Irvine 1, 5-31-70, dr 3600 ft. John Ackard's McKinley 1, 21-31-69, dr below 2700 ft.

FREMONT COUNTY—Producers & Refiners' Muskrat 1, 34-34-92, pipe at 452, dr 500 ft. Texas Production Co.'s Alkali Butte 1, 1-33-92, sp and sd. Zola Oil Co.'s Crook's Gap 1, twp 27, range 92, dr 3000 ft.

JOHNSON COUNTY—Fairway Oil Co.'s Crazy Woman 1, 7-47-82, dr 2400 ft.

NATRONA COUNTY—North Casper Creek O. & G., se 1-36-82, sp and sd. Combs Inc., Co., 12139-78, mvg in material.

NIOBRARA COUNTY—Penn. West Pet. Co., 13-35n-62w, resuming at 800 ft.

PARK COUNTY—Platte River Drill Synd., se 12-26-67, dr. Union of California's Taylor 1, 22-47-101, dr at 900 ft. Fred G. Ostland's Hoodoo Ranch 1, 53-51-102, dr 750 ft. Honolulu Oil Corp.'s Four Bear 1, 29-48-106, spd. Ralph Arnold & Chas. Mau's Frannie Structure, resuming at 1800 ft.

PLATTE COUNTY—Walter Adams, Trustee, sec 13-25-66, resuming at 1650 ft.

SWEETWATER COUNTY—Boar's Tusk Oil Company, 16-23-104, dr below 900 ft. Prairie O. & G.'s Tucker 1, 18-13-99, dr 100 ft. P. & R. Corp.-Marland Oil Co. of Colorado, 26-20-104, rigged.

WASHAKIE COUNTY—P. & R. Corp.'s Tensleep 1, 13-46-89, run 10-in at 1825 ft.

WESTON COUNTY—Allen Oil Co. & Olympic Ref. Co., twp 44, range 64, mvg in material.

UINTA COUNTY—Uinta Oil & Dev. Co., in town of Evanston, dr 600 ft.

NEW MEXICO

CURRY COUNTY—Hasson Pet. Co.'s Laird 1, 22-8-36, sp and sd. Fric Oil Co.'s Saunders 2, 11-5n-35, sd at 1240 ft. Clovie O. & G. Co.'s Hoskinson 1, 21-3n-36, dr below 3010 ft.

CHAVES COUNTY—Gibson Oil Corp.'s Forsyth 1, 8-11-23, sd at 675 ft. Buffalo-Roswell 1, 24-11-27, sd at 4258 ft. Texas Prod. Co.'s Wilson 1, 29-17-18, dr at 4680 ft. Twin Mounds Drlg. Co.'s Fahrlander 2, 11-6-27, sd at 80 ft. Arena Oil Co. 1, 18-13-s-31e, fsh tools at 750 ft.

DE BACA COUNTY—Trigg Synd. 1, 27-4n-22, sd at 300 ft. Barber-Woods Oil Co.'s Woods 1, 6-4-20, sd at 390 ft.

GUADALUPE COUNTY — Hanchett Oil Co.'s Rutherford 1, 24-8-24, dr below 2600 ft. Union Pet. Co.'s McMullen 1, 24-5n-16, sd at 235 ft to straighten titles. Navajo Oil Co.'s Goard 1, 10-3-17, sd at 2540 ft.

LEA COUNTY—Midwest Ref. Co.'s Hobbs 1, 9-19s-38e, mvg in material.

McKINLEY COUNTY—Smart & Reid, 7-17-9, bldg rig. Inland Oil Corp., 22-18-10, undrr fast in the hole at 763 ft. S. Dysart 1, 21-14-9, dr below 1507 ft. Continental Oil Co.'s Carrica 1, sw 9-17n-7w, dr 1200 ft. Jenkins Oil Co., 1-16n-9w, dr 300 ft. Williams et al 2, 30-18-8w, dr below 600 ft. Ohio Oil Co.'s Nightingale 1, 25-17-6w, dr 700 ft.

QUAY COUNTY—Gibson Oil Corp. 1, 25-8-32, set 8¼-in at 3500 ft, td 3502 ft. Ohio Oil Co.'s Jordan Ridge 1, 24-7-29, dr at 3875 ft.

TORRANCE COUNTY—San Juan O. & G. Co.'s Minerman 1, 32-7-10, sd at 2650 ft; San Juan O. & G.'s Randall 2, 20-6-19, dr below 4700 ft. Duran Dome Oil Co.'s Duran Dome 1, 31-2-14, fsh lost toocls at 1400 ft.

SAN JUAN COUNTY—Portage O. & G. Co. 3, 25-31-13, dr at 1185 ft; Portage O. & G. Co.'s Glade 1, 24-30-13, instal stnd rig, td 2160 ft. Kansas-Colorado Oil Co.'s Atterberry 1, 24-3-11, fsh tools at 1850 ft. Senate Oil Co.'s Lanier 1, 34-29-11, mvg heavier equipment to deepen from 1745 ft. T. C. N. Oil Co.'s Lanier 1, 9-29-11, mvg equipment. Huntington Park Oil Co. 2, 29-30-9, dr at 3695 ft. R. M. Smith's Abrams 2, 23-29-11, dr below 560 ft. Huerfano Oil Co.'s Wiltbalk 1, 25-29-11, plug back to 617 ft. Aztec Oil Dev. Co.'s Finch 1, 15-29-11, repairing equipment, to 650 ft.

SOCORRO COUNTY—Abo Oil Co. A1, 14-3s-6e, set 12½-in at 600 ft and sd to reorganize.

VALENCIA COUNTY — Acme Oil Co.'s New Mex-Ariz. Land Co., 26-6-3, rd 1962 ft, bldg stnd rig. Stone et al's Perrin & Swisher 2, 25-7-2, fsh pipe at 1967 ft.

UNION COUNTY — Sun State Pet. Co.'s Paso Monte 1, 14-24-30, sd at 2977 ft, operations to be resumed by Blankenship Pet. Co.

COLORADO

BOULDER COUNTY—Left Hand Oil Co.'s Prechtl 1, 34-3n-70, recem 4¾-in at 1954 ft. Essok Oil Co.'s Martin 1, 5-1s-70, cas trouble at 4245 ft. Repollo Oil Co.'s Nichols 1, 32-1n-70w, sp at 25 ft.

ELBERT COUNTY—Belmont Oil Co.'s Maher 1, 4-6-59, sd at 1350 ft.

FREMONT COUNTY—Fremont Leasing & Holding Co. 1, 2-19-70, fsh for cas, td 2000 ft. Columbia Oil Co.'s Sheridan 1, 20-18-70, sd at 2240 ft, wtg cas.

LAS ANIMAS COUNTY — Parker Club, Inc.'s Adams 1, 32-34-56, dr below 3020 ft. Folew & Goldsworthy's Government 1, 11-30-60, dr 1750 ft.

LA PLATA COUNTY — Klem Syndicate's Ferguson 1, 12-34n-7w, 6½-in set at 200 ft. Collins et al's Aspaas 1, 10-34n-11w, cleaning out at 560 ft.

LOGAN COUNTY—Northeastern Colorado Oil Co.'s State 1, 36-8-55, wtg 4½-in at 5010 ft.

MOFFATT COUNTY—Ohio Oil Co.'s Kuykenhall 1, 22-21n-11w, dr at 850 ft. Reiter-Foster's State 1, 16-12-100, dr at 1360 ft.

MONTEZUMA COUNTY—Coon & Cotton's Hall 1, 9-35n-13w, dr 215 ft.

RIO BLANCO COUNTY—Texas Pro. Co.'s Freeman 1, 27-3-94, fsh bit at 4945 ft.

ROUTT COUNTY—Morrison & Johnson's Hitchins 1, 31-7-85n, set cas at 2820 ft. Great West. Oil Co.'s State 1, 17-6n-86w, sp.

SAGUACHE COUNTY—Cook, Weber et al's State 1, 27-41n-10e, fsh at 4300 ft.

WELD COUNTY—Platte Valley Pet. Co.'s Patterson 1, 24-6-61, undrr 6-in, showing oil and gas, td 3300 ft. Platte Valley Pet. Co., 5-8-56, sd at 250 ft.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
COULMBIA COUNTY—		
Big Creek Oil Co., Runyon A-1, 3-16-21	*	800
HEMPSTEAD COUNTY—		
Arkansas Gas Co., Corrigan 1, 2-11-26	*	....

ASHLEY COUNTY—Glassell et al's Keller 1, 10-19-5, dr 2740 ft.

BRADLEY COUNTY—Johnson & Adams' Southern Lbr. Co. 1, 12-12-12, sd 2204 ft.

CALHOUN COUNTY—Genther et al's Stout 1, 3-14-16, dr 1856 ft.

COLUMBIA COUNTY — Columbia Oil Synd.'s Whitehead 1, 14-19-23, sd 2350 ft. Mitchell et al's Frank 1, 25-19-22, sd 150 ft. Mitchell & Isles' Bodcaw 2, 4-20-21, sd 2804 ft. Maier et al's Gantt 1, 15-17-22, dk. Scott-Phillips' Davis Lbr. Co. 2, 6-18-20, sd 2145 ft. Wingfield et al's Bodcaw 1, 4-20-21, sd 2025 ft.

DREW COUNTY—McClintock et al's Ogle 1, 35-13-5, sd 2550 ft.

GRANT COUNTY—Jones et al's Meeks 1, 5-14-11, sd 1400 ft.

LAFAYETTE COUNTY — Ken-Saw Pet. Co.'s Red River Lbr. Co. 2, 5-20-24, sd 2840 ft.

LINCOLN COUNTY—Pine Prairie O. & G. Co.'s Carter 1, 33-10-6, sd 2176 ft.

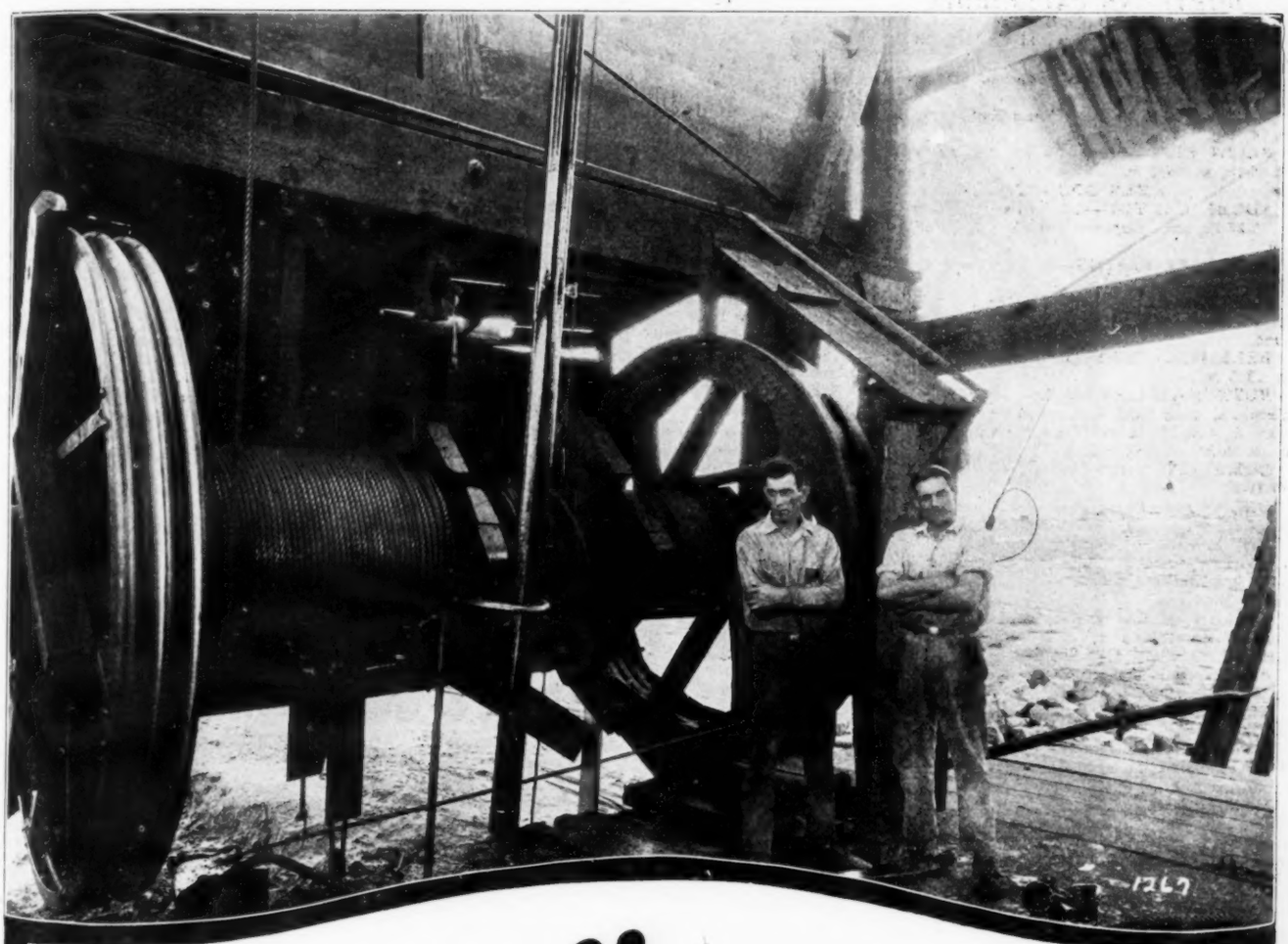
LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-31, sd 2941 ft.

MILLER COUNTY—E. B. Guess' M. & P. Bank 1, 30-15-26, arr to test 2929 ft. Lenze et al's Mann 1, 22-15-26, dr 1970 ft.

NEVADA COUNTY—Aines & Zingg's Womack 1, 10-14-21, wosr 1215 ft. Autrey Oil Co.'s Martin C-2, 6-14-20, set 6-in at 1185 ft. Burnham et al's Kinney 1, 9-14-21, fsh 1259 ft. Fruen et al's Rhodes 1, 22-12-21, sd 1515 ft. Humble's Fairchild 1, 6-14-20, wosr 1191 ft; Fairchild 2, 6-14-20, dk. McDonald et al's Pell 1, 9-15-22, rig. J. J. O'Brien's Haynie B-3, 1-14-21, wosr 1163 ft; Haynie B-4, 1-14-21, set 6-in at 1142 ft; Haynie B-5, 1-14-21, plugged back to 1163 ft; Moss A-5, 1-14-21, wosr 1162 ft; Moss B-8, 1-14-21, set 6-in at 1146 ft; Moss 1-14-21, dk.

OUACHITA COUNTY — Buffalo Oil Co.'s Culp 3, 22-15-19, sd 2075 ft. Brewer et al's Curry 1, 32-15-19, dr 1800 ft. F. A. Book, Tr.'s Johnette 3, 33-15-16, sd 2280 ft. Copenhagen et al's Berg 3, 13-15-17, sd 2193 ft. A. T. Grayson's Reynolds 1, 21-14-17, set 6-in at 1744 ft. H. M. Harrell, Tr.'s Camden C. & C. 1. 12-12-18, pulling cas 2105 ft. Magnolia's Stout B-1, 28-14-16, coring 2610 ft. Marine Oil Co.'s Hayes 5-A, 4-16-15, lcn; Snyder 14, 34-15-15, fsh 2363 ft. Moody Oil Corp's Bacon 1, 12-11-18, coring 1410 ft. Owenwood Oil Corp.'s Snyder 2, 34-15-15, arr to plug off bottom 1971 ft. J. D. Reynolds' Chandler 1, 3-14-16, arr to abd 1900 ft. Texas Co.'s Davisson 1, 26-15-16, dr 2450 ft.

UNION COUNTY—Brown et al's Slaughter 1, 2-17-16, sd 2296 ft. Bondurant et al's Garner 1, 8-18-12, sd 2635 ft. Booth et al's Rowland 1, 8-17-11, dr 900 ft. Gulf Ref. Co.'s Murphy 45, 4-16-15, dk. Imperial O. & G. Co.'s Murphy 5, 9-16-15, sd 2565 ft; Goodwin 1, 26-17-16, sd 3118 ft. E. M. Jones' Murphy 11, 17-16-15, set 5 3-16-in at 2513 ft. W. R. Keever's Ezell 2, 12-17-15, bld sw 2172 ft; Ezell 3, 12-17-15, lcn. Keene & Wolfe's Murphy 4, 9-16-15, coring 2698 ft; Murphy 6, 9-16-15, dk. Lyall et al's Stegall 1, 11-17-15, sd 47 ft. Lion O. & R. Co.'s Hays 7, 4-16-15, set 6⅝-in at 2280 ft. Magda Prod. Co.'s Tatum 6, 7-16-15, dr 2150 ft. Magnolia's Crawford 3, 8-16-16, dk; Laney 3, 8-16-16, dk; Laney 4, 8-16-16, dk; Wilson 7, 17-16-15, rig. Mountz et al's Pratt 6, 8-18-15, recemented 6-in at 2146 ft. Murdock et al's Vestal 1, 17-16-15, sd 2561 ft. National Son. Pet. Co.'s W. A. Fagg 1, 8-16-16, set 6-in at 2623 ft. Natural Gas & Fuel Corp.'s Hill B-3, 5-16-16, lcn. J. J. O'Brien's Saxon 1, 16-16-16, sd 2658 ft. Ohio's Murphy 5, 9-16-15, sd 2736 ft; Crain 2, 1-17-14, arr to kill sw flow at 3020 ft. Pitcher et al's Arkansas Timber Co. 1, 21-17-11, rig. Rovenger Oil Corp.'s Harrell 4, 15-17-16, dk. S. Richardson's Lawton 2, 10-16-15, fsh 2330 ft. Rice et al's Newton 1, 13-17-16, set 6-in at 2919 ft. Skelly Oil Co.'s Roper 8, 3-16-15, arr to bail 2297 ft; Roper 12, 3-16-15, dr plug 2373 ft. Smitherman & McDonald's Saxon A-2, 32-15-16, arr to deepen 1946 ft; Saxon B-5, 5-16-16, wosr 2534 ft. Sun Oil Co.'s Hays 3, 3-16-15, abd 2275 ft. Standard Oil Co.'s Murphy 33, 4-16-15, fsh 2551 ft. Wingfield et al's Greer 1, 15-19-13, sd 50 ft.



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NORTHERN CALIFORNIA

FRESNO COUNTY

CLOVIS—Fresno-Madera Oil Co.'s 1, 18-21-21, dr 3821 ft.

KETTLEMAN HILLS—Superior Oil Co.'s 1, 26-21-17, dr 3215 ft.

NORTH COALINGA—Potter-Esplin's 1, 6-16-14, rig.

RASIN CITY—Fresno-United Oil Co.'s 1, 23-15-18, sd 3960 ft.

KERN COUNTY

ADOBE CANYON—California Pet. Corp.'s 1, 25-27-28, lcn. Superior Oil Co.'s 1, 13-27-28, lcn.

ANTELOPE PLAINS—W. H. Davis' 1, 13-26-17, preparing to abn.

BAKERSFIELD—Pacific-Eastern Prod. Co.'s Union Avenue 1, dr 4500 ft in unsaturated sand.

BELRIDGE—Zurich Oil Co.'s 1, 18-28-22, dr 1335 ft.

BUTTONWILLOW—Milham Explo. Co.'s Kern 1A, plug 3250 ft, td 4660 ft, gas; Salisbury 1, 7-29-24, sd 4150 ft. McAdams et al's 1, 26-29-23, rigging rotary.

COMANCHE POINT—Kern 29 Oil Co.'s 1, 29-31-30, sd 2440 ft.

DELANO — Chanslor-Canfield Midway's 1, 23-27-27, 6¼-in cmt 2162 ft, td 2300 ft.

DEVIL'S DEN—W. T. Garrett's 1, 30-25-19, rig. Marathon Oil Co.'s 1, 13-25-18, sd 4390 ft. Midway Northern Oil Co.'s 1, 25-25-18, dr 2300 ft.

EDISON—Kerwin & Sealey's 1, 4-30-29, rig. George F. Getty's 1, 22-29-29, dr 2470 ft. General Pet. Co.'s 1, 5-30-29, dr 2580 ft.

FRUITVALE—Pacific-Eastern Prod. Co.'s 1, 21-29-27, rigging rotary.

GREENFIELD—Mays- Valencia's 1, 31-30-28, rig.

GOULD HILLS—Bomke & Ball's 1, 12-29-20, running 6¼-in cas to carry, td 1150 ft. California-Kentucky Oil Co.'s 1, 8-29-21, redr 1575 ft. Mendocino-Midway Oil Co.'s 1, 28-29-21, sd 2930 ft. White Behr Cons. Oil Co.'s 1, 30-29-21, plug 1460 ft, td 1485 ft, testing on pump. L. E. Westrich's 1, 19-29-21, sd 1755 ft.

McKITTRICK—Abbott Pet. Co.'s 1, 2-30-21, sd 1940 ft. Lacy-Esper Pet. Co.'s 1, 18-19-22, sd 3265 ft. Keefe-Morrison's 6A, 8-30-22, gas at 2253 ft. Myrtle E. Oil Co.'s 1, 8-29-21, sd 915 ft. McKittrick Hills Oil Co.'s 1, 18-30-22, sd 3250 ft. Ozena Oil Co.'s 1, 27-29-21, dr 1629 ft. Ridge Oil Co.'s 1, 13-20-21, sd 4045 ft.

MON BLUFF—Miocene Oil Co.'s 1, 34-27-28, rig. Shell's Glide 1, 3-28-28, dr 2550 ft.

NORTH MIDWAY—Gore Oil Corp.'s 1, 34-30-22, sd 1350 ft. Electric Pet. Corp.'s 1, 34-30-22, sd 1620 ft.

SHALE HILLS — Huntington-Hawthorne Oil Co.'s 1, 35-26-18, sd 600 ft. Nelson & Mountford's 1, 18-27-19, sd 2960 ft. Oildale Oil Co.'s 1, 13-27-18, sd 560 ft.

SUNSET—Fresno-Sunmaid Oil Co.'s 1, 16-11-24, sd 4200 ft. Raleigh Oil Co.'s 1, 8-11-23, dr 2626 ft.

TEMBLOR—Fortuna Oil Co.'s 1, 28-32-23, sd 2655 ft. Hovey Hills Oil Co.'s 1, 19-31-22, sd 2450 ft. Painted Hills Oil Co.'s 1, 19-31-22, sd 500 ft.

TEHACHAPI-MOJAVE—C. R. Asmussen's 1, 23-11-11, sd 1510 ft. Crusaders Oil Co.'s 1, 21,10-10, testing 6¼-in cas 2255 ft, td 2375 ft. John B. Harding's 1, 5-10-10, sd 5050 ft.

KINGS COUNTY

KETTLEMAN—Associated's 1, 12-23-18, sd 2043 ft. Bolsa Chica Oil Co.'s 1, 30-23-19, sd 3500 ft. Chanslor-Canfield Midway's 1, 17-24-19, fsh for dr pipe 5010 ft. General Pet. Corp.'s 1, 4-23-19, plug 2900 ft, td 3105 ft, small quantity oil; 1, 4-24-19, fsh for dr pipe 3800 ft; 1, 22-26-18, dr 4630 ft, some gas. Milham Explo. Co.'s 1, 2-22-17, dr 4363 ft. Hugh McPhail's 1, 13-24-18, sd 2090 ft. South Coalinga Oil Co.'s 1, 35-24-19, dr 2866 ft.

SANTA BARBARA COUNTY

GOLETA—Barnsdall's Edwards 1, plug 2485 ft, td 2715 ft, testing production.

BUELLTON — Buttram Brother's Odin 1, lcn.

SANTA YNEZ—San Marcos Synd.'s 1, 34-7-29, dr 2250 ft.

SANTA BARBARA—H. R. Dabney's Wright 1, rig. Channell O. & Dev. Co.'s 1, 22-4-26, dr 5530 ft. Hollywood Oil Corp.'s 1, 35-5-35, sd 1300 ft.

SUMMERLAND — Summerland Oil Co.'s Becker 1, trying to locate water 3030 ft.

VENTURA COUNTY

CAMARILLO—Standard's Camarillo 1, drill pipe stuck 5591 ft.

FILLMORE—Sespe Oil Co.'s Smith 2, sd 4004 ft.

HOPPER CANYON—Hopper Canyon Oil Co.'s 1, sd 5005 ft.

MOORPARK—E. A. Parkford's Lloyd 1, dr 3795 ft. Shell's Berylwood 1, dr 5430 ft.

RINCON—Chanslor-Canfield Midway's Hobson 1A, dr 6770 ft; Hobson 1B, dr 5400 ft. Montecito Oil Producer's 1, dr 3454 ft. Pan American Pet. Co.'s State 1, dr 3050 ft with oil in evidence.

SANTA PAULA—W. W. Bryant's Anlauf 1, 21-4-21, sp.

STRATHERN—Shell's Strathern 1, 6-2-18, bldg rig, new lcn.

SESPE—Group Synd.'s 1, 1-4-20, rig.

SOUTH MOUNTAIN — Ring Pet. Co.'s Converse 1, cmt 3590 ft.

RED MOUNTAIN—Miley Oil Co.'s Casitas 2A, dr 765 ft.

SULPHUR MOUNTAIN — Geiss & Bradford's 1, 21-4-22, fsh 2000 ft.

SQUAW FLATS—Border Oil Co.'s 1, sd 675 ft.

TIMBER CANYON—San Pedro-Point Fermin et Synd.'s 1, 13-4-21, fsh 200 ft.

VENTURA — Associated's Dabney-Lloyd 1, dr 6260 ft, oil showings.

MISCELLANEOUS

SAN LUIS OBISPO COUNTY—Brinkman Oil Co.'s 1, 22-31-21, sd 720 ft. Butler-Ritchie's 1, 7-32-22, sd 700 ft. Richfield Oil Co.'s 1, 10-29-17, dr 700 ft. Waklin Pet. Co.'s 1, 27-11, swabbing water 2475 ft, ok.

COLOUSA COUNTY—Continental Oil Co.'s Keoughon 2, setting 10-in at 3200 ft. Prize Oil Co.'s 1, 17-4-1, sd 875 ft.

HUMBOLDT COUNTY—Eureka Oil Co.'s Duff 1, little gas 3070 ft.

SAN MATEO COUNTY—Shell's Cowell 1, 8-6-5, 5630 ft.

SONOMA COUNTY—Shell's Murphy 1, 8-5-7, dr 6360 ft; 2, 8-5-7, dr 1460 ft.

TULARE COUNTY—Birch Oil Co.'s 1, 13-21-26, fsh for dr pipe 2040 ft. Ducor Drilling Co.'s 1, 29-23-27, plugging back to 3900 ft, td 4160 ft. Federal Explo. Co.'s 1, 15-22-24, setting 6¼-in cas 5460 ft.

SOUTHERN CALIFORNIA

Completions

Company, Well and Location		Initial Production Bbls.	Depth
HUNTINGTON BEACH—			
Petroleum Securities Co., Mills 1....	*	4660	
SAN BERNARDINO COUNTY—			
Lamona Oil Assn., Vizio 1	*	930	

BOYLE HEIGHTS—Haskell M. Greene's P. A. S. F. 1, sdtr dr pipe 2830 ft, td 2995 ft.

CLAREMONT—Claremont O. & G. Co.'s 1, sd 1130 ft.

DAVIDSON CITY—California Well Drilling Co.'s 1, recmt 6¼-in 6510 ft, td 6620 ft.

DOMINGUEZ — Dominguez Extension Oil Co.'s Ramsey 1, sd 5510 ft.

EL SEGUNDO—Rider Synd.'s El Segundo 1, sd 2300 ft. Southern California Drilling Co.'s Matteson 1, sd 4865 ft.

GARDENA—Circle O. & G. Co.'s Pomeroy 1, sd 4130 ft.

HAWTHORNE — San Clemente Oil Co.'s Peck 1, oil showings 4870 ft. James O'Donnell's 1, dr 3180 ft.

HUNTINGTON BEACH — E. J. Miley's (Calnan) 1, dr in sandy shale 4575 ft. Petroleum Securities Co.'s Mills 1, abn 4660 ft.

INGLEWOOD—Compton & Hearst's 1, 28-2-14, lcn.

LANCASTER—J. B. Harding's La Loma 1, testing cmt 520 ft, td 702 ft.

MAYWOOD—Magnolia Pet. Synd.'s 1, sd 4450 ft.

MONTEREY PARK—Monterey Park Pet. Co.'s Browning 1, dr 2000 ft.

MONTEBELLO — Rotary Air Drill Co.'s Germain 1, sd 1400 ft.

NEWHALL—W. W. Stabler's Castaic 1, sd 3408 ft. Thomasson & McCoy's S. F. Canyon 1, sd 1610 ft.

OLIVE—Standard's 1, dr 3950 ft.

ORANGE—Chas. A. Son's Pinkerton 1, dr 2350 ft.

PLACENTIA—Shell's Allec 1, dr 3890 ft.

POTRERO—Associated's Cypress 1, dr 4465 ft.

PUENTE HILLS—Anchor Pet. Co.'s Hudson 1, fsh 1900 ft.

SAN FERNANDO — Shell's Mssion 1, dr 4203 ft.

SAN JOSE HILLS—Bardeen Oil Co.'s Didier 1, testing cmt 2030 ft, td 2255 ft. D. & B. Oil Co.'s Ama 1, plug 3000 ft, td 4380 ft.

SAN JUAN CAPISTRANO—O. K. Carr's Forster 2, dr 3960 ft.

TELEGRAPH CANYON—Quadra Pet. Co.'s M. J. M. 1, sd 4210 ft.

WATTS—Southwest Pet. Co.'s Ramsaur 1, dr 3600 ft.

WATSON—White Behr Cons. Oil Co.'s 1, ready to sp.

YORBA—Standard's Y. L. W. 1, dr 3941 ft. Pet. Securities Co.'s Kraemer 1, dr 2988 ft.

MISCELLANEOUS

RIVERSIDE COUNTY—Duncan O. & G. Co.'s 1, sd 1550 ft. Hemet Pet. Co.'s Ward 1, sd 1408 ft. Spindletop Oil Synd's Salton 1, dr 2780 ft. Trabuco Oil Co.'s 1, dr 2477 ft.

SAN BERNARDINO COUNTY—Colton Terrace Oil Co.'s 1, dr 1466 ft. Como Oil Co.'s Cajon 1, sd 2845 ft. Del Rosa Oil Co.'s 2, sd 915 ft, tools in hole. Hesperia Oil & Gas Co.'s 2, plug 2400 ft, td 3312 ft, sd H. & P. Oil Co.'s Ranger 1, sd 2150 ft. McCarty & Collier's McCarty 1, sd 1340 ft. Summit Oil Co.'s Cajon 1, sp, sd. Western Pacific Oil Co.'s 3, sd 3005 ft. Lamona Oil Assn.'s Vizion 1, abn 930 ft.

LOUISIANA

Completions

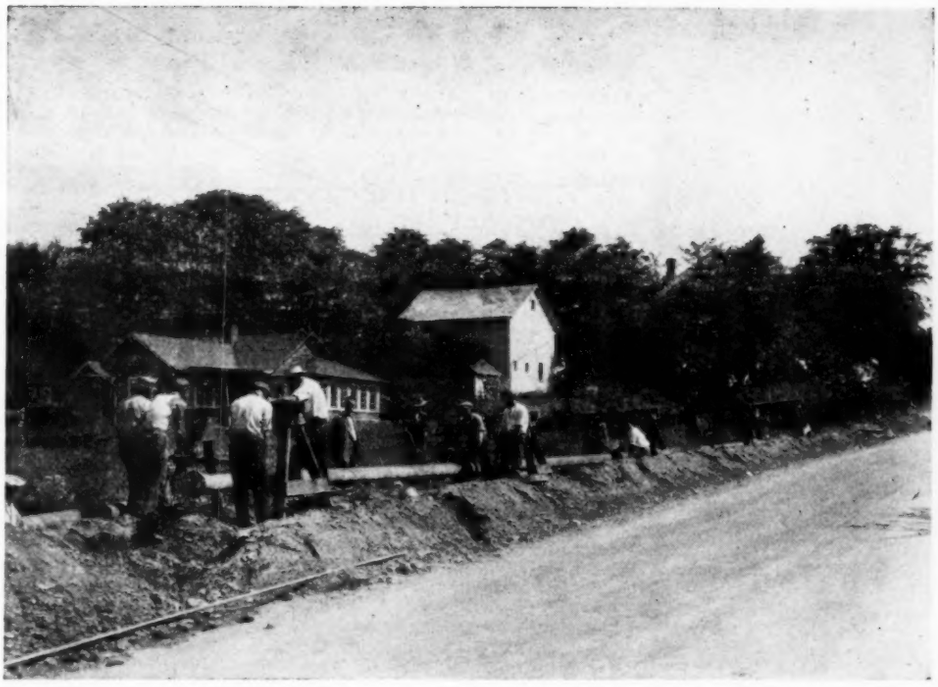
Company, Well and Location		Initial Production Bbls.	Depth
BOSSIER PARISH—			
Palmer Corp., Bossier L. L. Co. 4, 9-16-11	*		5370
CADDO PARISH—			
Magnolia, Bell 1, 4-17-16	*		3059
CATAHOULA PARISH—			
S. D. Hunter, Tensas Delta 2, 21-9-6e	*		loc
NATCHITOCHES—			
Lawson & Pharris, Bolton 1, 28-5-6w	*		loc
WINN PARISH—			
F. A. Schuman, Albritton 1, 27-10-1e	*		1518

BIENVILLE PARISH—E. J. Forrest's Perritt 1, 11-17-6, sd 415 ft.

BOSSIER PARISH—Bahan & Davis' Dodson 1, 15-23-12, rig. Bethany O. & G. Co.'s Dodson 2, 16-23-12, set 8-in 800 ft. Doern et al's Bollinger 1, 9-22-11, dr 1800 ft. H. S. Goodwin, Tr.'s Curtis 1, 2-16-13, to test 1006 ft. Hamiter et al's Hamiter 1, 10-23-13, rig. Humble's B. & W. 30, 15-19-11, dr 4205 ft. Jensen et al's Hale 1, 17-18-11, sd 376 ft. Magnolia's Dodson 1, 16-23-12, set cas 3082 ft. Z. Roberson 1, 23-23-12, set 13¾-in 467 ft; G. W. Robertson 1, 26-23-12, lcn. J. S. McCullough, Tr.'s Hodges 3, 25-16-12, set 6-in 1540 ft. Northwest Louisiana Gas Co.'s Mays 1, 22-23-12, dr 1100 ft. Simms Oil Co.'s Dodson 1, 15-23-12, set 6⅝-in 3075 ft. Sligo Synd.'s Smith 2, 24-17-12, rig. Sales & Walker's Bollinger 3, 30-23-11, milling casing 2560 ft. Texas Co.'s Wilkinson 1, 26-23-12, set 8-in 1177 ft. Triangle Drlg. Co.'s Sentell & Dickson 1, 3-20-13, dr 500 ft. Walker et al's Antrim 1, 28-23-12, sd 1360 ft. Woodley & Collins' J. S. Farrington 1, 23-23-12, fsh 3105 ft; Lincoln 1, 21-16-10, sw at 1642 ft.

CADDO PARISH—Arkansas F. O. Co.'s Lane 2, 13-21-15, dr 3505 ft; Huckaby 1, 14-21-15, arr to reset cas 3880 ft; Bashara 2, 23-21-15, dr 3595 ft. Belchic & Lasky's Sharp 2, 10-18-16, dr 650 ft. Bethany O. & G. Co.'s Offenhauser 1, 1-20-16, wosr 2260 ft. J. O. A. Carper, Tr.'s Hammock 1, 27-18-16, rig. Dixie's C. M. L. 9, 23-21-15, dr 3090 ft; Files-Mabry B-6, 14-21-15, dr 3640 ft; Slattery 10, 27-21-15, sd 4106 ft; Noel A-2, 13-21-15, dr 3920 ft; Robertshaw 89, 14-21-15, dr 3700 ft; Robertshaw 90, 14-21-15, dr 3597 ft; Huckaby 4, 11-21-15, dk. W. W. Dodson's Rives 6, 5-20-16, wosr 1866 ft. Double I Oil Co.'s Watkins & Lane 7, 27-21-15, dk. Falcon Drlg. Co.'s Schmidt 1, 27-20-15, blg 2292 ft. T. D. Gray et al's Hart 1, 29-21-16, arr to drill deeper 1966 ft. Greenwood Prod. Co.'s McCutcheon 1, 15-17-16, dr 2040 ft; Agurs 3, 6-16-16, dk. Gulf's Herndon 11, 15-21-15, lcn. Golden Rod Oil Co.'s Hampton A-1, 15-21-15, dr 3860 ft. Haynes Bros.' Murray 2, 14-21-15, dr 3763 ft; Spell 2, 15-21-15, dr 2699 ft. Lewis Oil Corp.'s Vespy 9, 15-21-15, dk. Magnolia's Bell 2, 4-17-16, lcn; J. W. Furrh 1, 28-18-16, gas and sw at 1695 ft; J. Fuhrr 1, 32-18-16, rig; Dillon 18, 24-21-15, dk; Dillon 21, 23-21-15, lcn; Robertshaw 21, 23-21-15, sd 3607 ft; Rob-

REPUBLIC



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ertshaw 22, 23-21-15, lcn; Hampton A-8, 15-21-15, set 13⅜-in at 200 ft. Ohio Oil Co.'s Aaron B Land Co. 1, 32-23-16, sd 1553 ft; Plum 1, 32-23-16, sd 1619 ft; Smith 25, 12-21-15, sd 4750 ft. Pittsburgh O. & D. Co.'s Huckaby 1, 15-21-15, sd 3946 ft; Herndon 1, 15-21-15, dr 3889 ft. D. C. Richardson's Youree-Randolph 5, 13-20-15, wosr 2266 ft. Shreveport Oil Corp.'s State 1, 23-21-16, dk; State 2, 27-21-15, sd 2400 ft. Simplex Oil Co.'s Thomas et al 3, 15-20-15, wosr 2355 ft. Standard's Stiles 179, 23-21-16, wosr 1838 ft; Stiles 189, 27-21-16, wosr 1836 ft. Superior Oil Co.'s Youree 6, 26-20-15, wosr 2301 ft. Texas Co.'s C. M. L. 47, 23-21-15, sd 2657 ft; C. M. L. 49, 23-21-15, sd 3568 ft; C. M. L. 50, 23-21-15, set 8⅛-in at 2573 ft; C. M. L. 51, 23-21-15, dr 3010 ft; Mabry 10, 15-21-15, testing 3690 ft; Herndon 6, 14-14-15, blowing with air 3727 ft; Herndon 7, 14-21-15, dk; Herndon 9, 14-21-15, arr to set 8¼-in at 3580 ft; Herold 9, 14-21-15, testing 3625 ft; Herold 10, 14-21-15, dr 3255 ft; Raines 19, 15-21-15, rebldg dk 2868 ft; Noel B-14, 14-21-15, dr 3320 ft; Tubbs et al's Hines 1, 16-14-16, dr 760 ft. Woodley Pet. Co.'s Knight B-3, 11-15-12, set 6-in at 2459 ft. Woodley & Collins McVey 2, 23-19-14, rig.

CALDWELL PARISH—Grayson Oil Co.'s Crockett 1, 6-12-4, sd 2692 ft. Southern C. O. Purch Co.'s Caldwell L. & T. Co. 8, 5-13-5e, dr 1414 ft.

CATAHOULA PARISH — S. D. Hunter's Tensas Delta 3, 4-9n-8e, dr 200 ft. Lochnager et al's Beazley 2, 26-9-6e, dr 50 ft.

CLAIBORNE PARISH—Magnolia's Lee 1, 16-22-8, set 8⅛-in at 4090 ft.

DESOTO PARISH — J. H. Askew Richardson 1, 25-13-11, set 6-in, 2475 ft. Chal Daniels et al's Frost Johnson 1, 1-11-16, sd 100 ft. Dixie's Jenkins 1, 9-12-11, dr 5584 ft. Hazlett-Simmon's Neely 2, 1-14-12, rig. Magnolia's Logan 1, 17-10-12, r 3193 ft. Reliance Drlg. Co.'s Jones 1, 8-11-14, sd 2815 ft. W. M. Sebastian's D. H. Sebastian 1, 11-10-13, sdtr 3405 ft. Texas Co.'s Sample C-15, 36-15-12, sd 2551 ft; Wemple A-6, 2-12-12, wt on ct 2400 ft; Brinkerhoff B-36, 30-12-10, sd 2502 ft. Wingfield et al's Robertson A-1, 18-10-12, set 10-in at 140 ft.

FRANKLIN PARISH — Barbour Oil Co.'s Baker 1; 3-15-7e, sd 3884 ft.

GRANT PARISH—Holmes et al's Swope 2, 18-9-1e, lcn. L. C. Swope et al's Fee 3, 18-9-1e, plugging off bottom 1607 ft; Fee 5, 18-9-1e, dk.

LA SALLE PARISH—Montague Oil Co.'s Consolidated Carbon Co.'s Perry 1, 14-20-4e, lcn. Keisker et al's Bonita Lbr. Co. 1, 10-23-9e, dk. Natural Gas Prod. Co.'s Tensas Delta [illegible] 2e, set 8-in at 918 ft; Tensas Delta [illegible] Texas Co.'s Sivley 1, 22-20-6e, sd 3005 ft. United Carbon Co.'s Atkins 1, 26-20-5e, dk.

NATCHITOCHES PARISH — Lawton & Pharris' Wise 1, 28-5-6w, dr 850 ft. Ohio's L. & A. 2, 26-13-6w, arr to test 3135 ft. Tate et al's Leopole 1, 4-10-10, lcn.

OUACHITA PARISH—C. W. Frierson's Feazel 1, 17-19-4e, set 6-in at 2135 ft. J. S. Gould's Grayling 1, 11-15-2e, dr 2722 ft. Hatcher & Evan's Hatcher 6, 16-19-4e, rig. Industrial Gas Co.'s Sullivan 2, 5-18-4e, dr 1700 ft; McGee 1, 3-18-4e, dk. Louisiana Dev. Co.'s Fee 44, 6-19-5e, set 6-in at 2145 ft; Fee 45, 20-20-5, dk. Peerless Co.'s Moore 3, 49-20-4e, lcn.

RICHLAND PARISH—Gulf's Marshfield 2, 29-17-6e, set 6⅝-in at 2318 ft; Marshfield 3, 30-17-6e, set 10-in at 912 ft. Helm et al's Tensas 1, 10-14-5e, sd 22 ft. Louisiana Pet. Co.'s Binion 1, 22-17-6e, sd 2474 ft. Moody & Seagraves' McCoy 1, 36-16-6e, set 6-in at 2305 ft; McCoy 2, 30-16-6e, dk; Jones 1, 15-18-7e, dr 1436 ft. Natural G. & F. Corp.'s Sortor 1, 20-16-6e, set 6-in at 2285 ft; Sortor B-2, 19-16-6e, lcn. Oliver et al's Hatch 1, 2-15-5e, sd 2316 ft. Standard Drlg. Co.'s Delta H. L. Co. 1, 22-16-7e, sd 1500 ft. Tex-La Carbon Co.'s Broughton 1, 1-15-6e, dr 2782 ft. Woodley Pet. Co.'s Hemler 1, 31-18-7e, dr 2240 ft.

SABINE PARISH—Arkansas F. O. Co.'s Logan A-1, 23-10-12, dr 3696 ft; Logan 10, 32-10-12, sd 3980 ft; Logan 11, 33-10-12, dk; Moore 2, 32-10-12, dr 2440 ft. Emlet et al's Bowman Hicks 6, 8-7-12, sd 3710 ft; Bowman Hicks 6, 8-7-12, sd 3710 ft; Bowman Hicks 7, 1-7-14, dr 3073 ft; Mansfield H. L. Co. 1, 15-7-14, sd 515 ft. Frazier et al's Harris 1, 29-10-12, dr 2820 ft. Longoria et al's Burkett 1, 9-9-13, dk. Magnolia Pet. Co.'s Rembert 1, rig; Hall 2, 33-10-12, dr 2546 ft. Tate et al's 32-10-12, wosr 4240 ft; Rembert 2, 32-10-12, Cook Land Co. 1, 23-10-11, sd 3295 ft. A. H. Tarver's Long Bell Lbr. Co. 1, 5-8-13, dr 3189 ft.

UNION PARISH—Camette et al's Tugwell 1, 21-22-1e, sd 2112 ft. Interstate Nat. Gas Co.'s Parks 1, 32-20-3e, rig; Stephenson 1, 6-21-4e, lcn. Southern Carbon Co.'s Harris 1, 20-20-4e, set 12½-in at 89 ft.

WEBSTER PARISH—Crusader O. P. Co.'s Hope 18, 24-21-10, plugging back 2510 ft. Magnolia's Cox 3, 23-21-10, set 6⅝-in at 4301 ft; Aarnes Cox 3, 22-21-10, dk; Marshall 4, 21-21-10, set 6⅝-in at 2649 ft; Wise 1, 30-23-9, lcn; Cole 1, 27-21-10, dr 461 ft; D. G. Cox 1, 22-21-10, dr 297 ft. Ohio Oil Co.'s Holloway 4, 23-21-10, set 6⅝-in at 3400 ft. Shreveport-El Dorado Pipe Line Co.'s Gamble 1, 33-20-8, coring at 3065 ft.

WINN PARISH—Dodge et al's Tremont 1, 35-13-3w, sd 1558 ft. Ohio's Rolem 1, 9-12-1w, sw at 2149 ft; Edenborne 1, 31-10-4w, dr 160 ft; Rolen Account 1, 5-12-1w, dr 50 ft. H. M. Roark's Southern Mineral Co. 1, 19-11-3w, dr 157 ft.

WEST CARROLL PARISH — Palmer Corp.'s Pioneer Cooperage Co. 1, 16-20-10e, sd 2682 ft. Phillips Pet. Co.'s Darnell 1, 32-20-9e, sdtr drill stem at 2490 ft.

EAST TEXAS

ANDERSON COUNTY—Brooks et al's Henbry 1, Joseph Mertz sur, dk. Cosden Oil Co.'s Douglas 1, Isaack sur, dr 4375 ft. Humble's Russell 1, Nancy Cannon sur, dr 3576 ft; Spencer Clemens 2, Beacon sur, dr 3113 ft.

CASS COUNTY—Mid Kansas O. & G. Co.'s Rodgers 1, Cass County School Lands sur, dr 1940 ft.

CAMP COUNTY—J. C. Rogers' Boyd 1, R. M. Montgomery sur, rig.

CHEROKEE COUNTY—Humble's Elliott 2,

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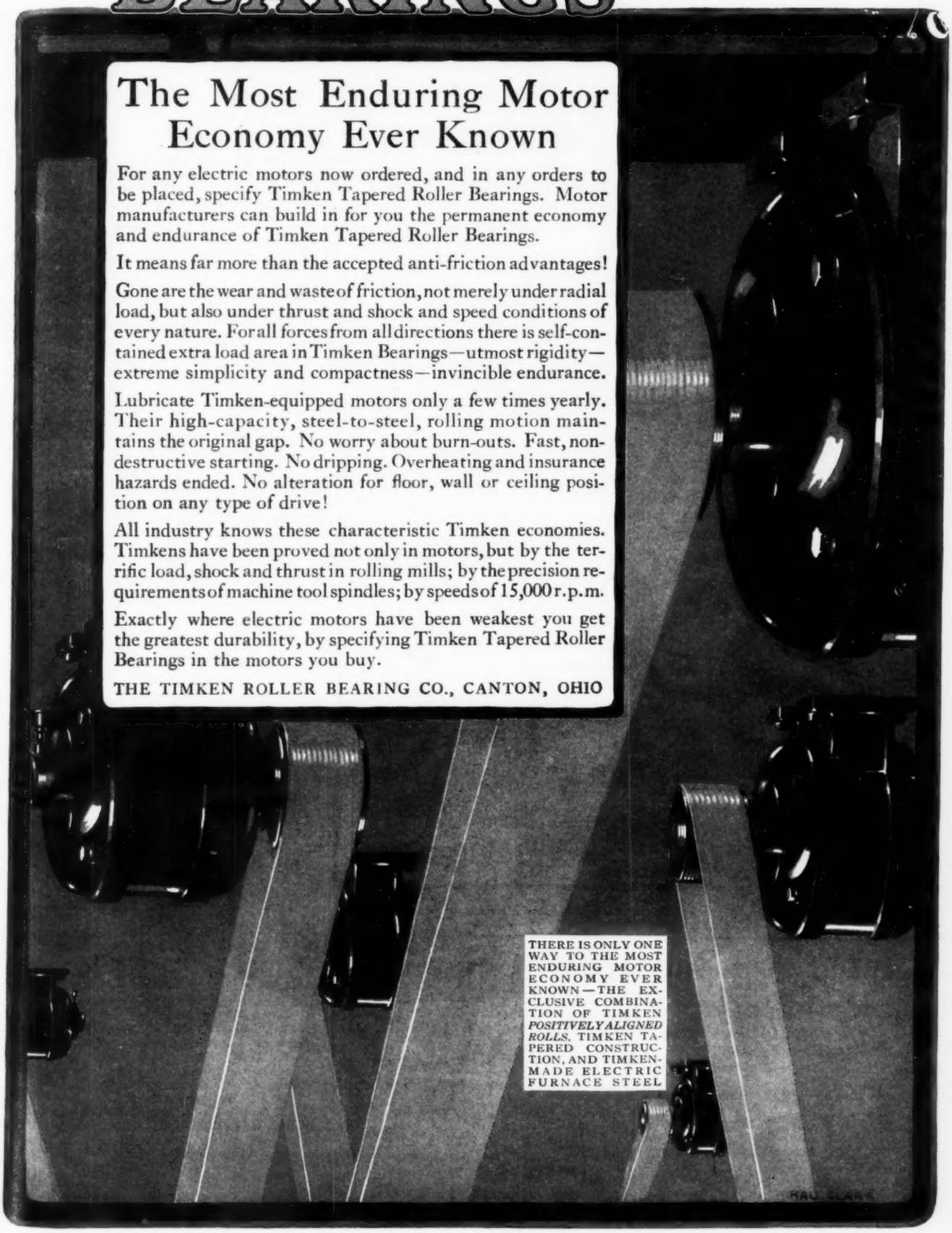

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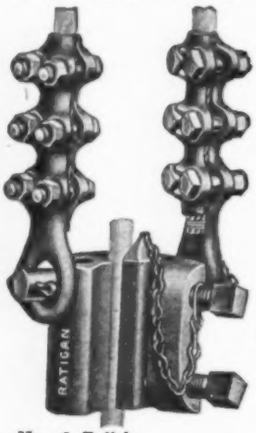

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HENDERSON COUNTY—Cayton et al's Hoffer & Nash 1, H. Jefferson sur, sd 2910 ft.

HARRISON COUNTY — J. R. Bahan's Hickman 2, lcn not checked, dr 2318 ft; Furrh 4, J. Short sur, set 6-inch at 986 ft. Cox et al's Clark 1, Joel Lipscomb sur, dr plug 960 ft. Clark et al's Furrh-Jones 1, R. W. Bedford sur, dr 670 ft. C. H. Lyons' Bryson 1, T. D. Wilson sur, dr 780 ft. Magnolia's Anderson 1, J. Womack sur, coring 1942 ft; Trosper 2, J. H. Harrison sur, sd 2862 ft; Tropser 4, J. H. Harrison sur, dk. State Line O. & G. Co.'s Isaacs & Hardman 1, E. Little sur, rig. Tylong O. & G. Co.'s Cook 2, R. W. Bedford sur, sd 1930 ft.

KAUFMAN COUNTY — Cranfield et al's Nicholson 1, A. Bennett sur, sd 3250 ft.

MARION COUNTY—William Gross' Baker 1, J. French sur, dr 1650 ft.

NACOGDOCHES COUNTY—Stein & Lewis' Birdwell 1, Jose A. Chirino sur, sd 1100 ft.

PANOLA COUNTY —Magnolia's Jernigan 1, Jane Thorpe sur, dk; Baker 2, B. C. Jordan sur, dr 973 ft; Lewis 7, Jas. Johnson sur, set 6-inch at 1924 ft; S. Davenport 2, Jessee Dunlop sur, dr 1497 ft; Trosper 1, J. Shandoin sur, dr 1874 ft.

RUSK COUNTY — C. M. Joiner et al's Bradford 1, K. Ximenes surfi sd 616 ft. Magnolia Pet. Co.'s Durren 1, Agulla Norris sur, dk. McCurrie et al's Sparks 1, Jesse Coarse sur, sd 2148 ft. Rusk Development Co.'s Mathews 1, D. Cortinas sur, sd 2330 ft. Texas Co.'s Schultz 1, A. Loffton sur, dr 2185 ft.

SMITH COUNTY—Dr. Gathier's Parker 1, Don Thomas Quevedo sur, dr 3249 ft.

SHELBY COUNTY—Magnolia's Pickering 1, Wm. J. Crane sur, coring 2645 ft. W. M. Sebastian's Pickering 1, T. F. Polly sur, sd 2830 ft.

SABINE COUNTY—Crater Oil Co.'s Mills 2, Anthony Shoals sur, sd 2000 ft. Humble's Temple 15, A. J. Lott sur, dr 800 ft.

UPSHUR COUNTY — S. W. Richardson's Newsome 1, A. Butler sur, sd 2025 ft; Minor 1, A. Lowery sur, cleaning out with cable tools 3500 ft.

SOUTH LOUISIANNA

Completion

Company, Well and Location	Initial Production Bbls.	Depth
CALCASIEU PARISH—		
Union Sulphur Co., Fee 721 Sulphur Dome	150	3338

ACADIA PARISH — Yount-Lee Oil Co.'s Houssiere-Latrielle 1, Jennings, abn 3055 ft.

CALCASIEU PARISH—Dr. Hintze's Beckenstein 1, Sulphur Dome, sd 4260 ft. Union Sulphur Co.'s Fee 721, Sulphur Dome, completed for 150 bbls at 3338 ft. Newton Dev. Co.'s Dupre 1, Lake Charles, dr 1823 ft gbo. La. Land & Explo. Co.'s Calcasieu Lake 2, lcn.

CAMERON PARISH—Pure Oil Co.'s Sweet Lake 5, Sweet Lake, sd 5120 ft. Calcasieu Oil Co.'s Caldwell 2, Hackberry, dr 3330 ft gbo and lime. Yount-Lee Oil Co.'s State Black Lake 5, Hackberry, coring sand 4835 ft; N. S.

JEFF DAVIS PARISH—Estropal Oil Co.'s Le Doux 2, sd 2980 ft. John Carrodine et al's Walsh 1, Welsh, standing 1355 ft.

IBERIA PARISH — Calcasieu Oil Co.'s Schwing A-1, Eagle Point, dr 3782 ft, hard sand. Gulf's State's Z-3, Fausse Point, lcn; Brussard 1, Fausse Point, lcn. La. Land & Explo. Co.'s Vermillion Bay 2, lcn.

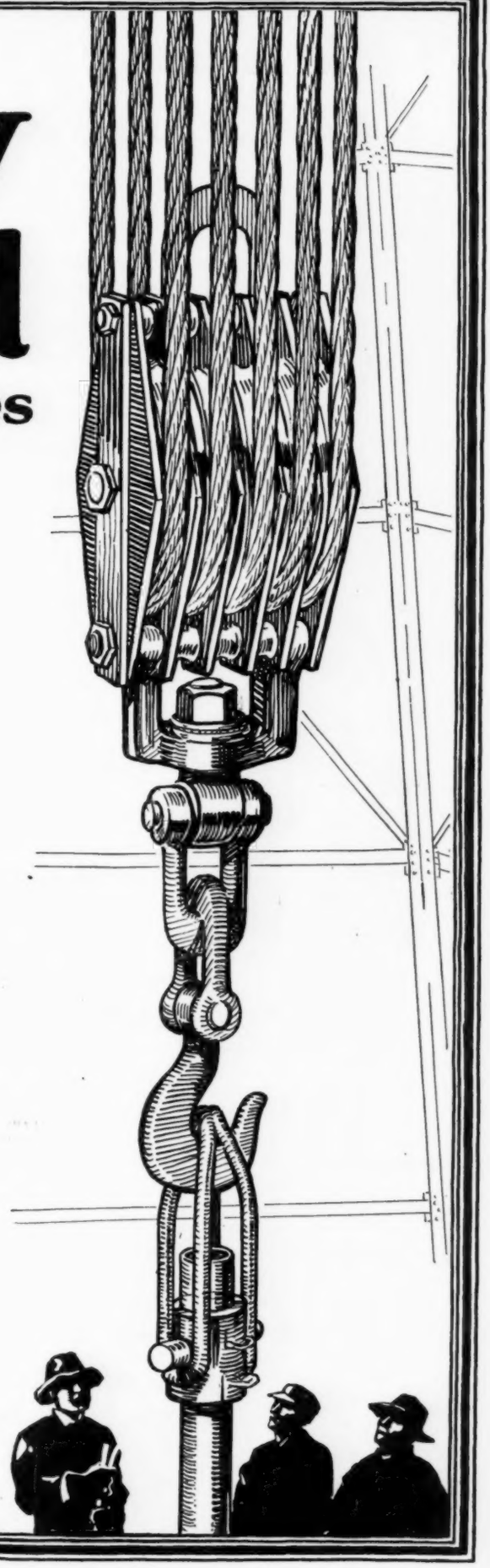
LA FOURCHE PARISH — Gulf's Dibert-Stark-Brown, Thibodaux, dr 1296 ft hard sand.

ST. MARY PARISH—La. Land & Explo. Co.'s West Cote Blanche 1, dr 2523 ft gbo. Jacob Dannenbaum's Viguerie 1, Grand Lake, lcn.

ST. MARTIN'S PARISH—Rycade's Atchafalaya 1, top cap rock 3859 ft, cryst sand 3869 ft.

TERREBONNE PARISH—Terrebonne Gas Co.'s Gaidry 1, Houma, lcn.

Yellow Strand
Rotary Drilling Lines



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Seneca Falls, New York

TEXAS GULF COAST

Completions

Company, Well and Location	Initial Production Bbls.	Depth
AUSTIN COUNTY—		
Humble,, Kujewa 1, Raccoon Bend	¶	1020
BRAZORIA COUNTY—		
Roxana, Pabst 2-A, Clemens Dome	*	6319
FORT BEND COUNTY—		
Gulf, Trone 4, Long Point	*	1184

AUSTIN COUNTY — Humble's Paine 1, Raccoon Bend, lcn; 3900 ft sw along se line and 500 ft nw at right angles (S. W. Thompson tr) W. C. White sur. T. F. Woods' Trenckmann 1, 1½ miles w of Peters, dr 650 ft. gbo.

BRAZORIA COUNTY — Roxana's Pabst 2-A, Clemens Dome, abn. Roxana's Allen Bernard River 1, Allen Dome, sanded up; Allen 4, Allen Dome, reaming 5303 ft, shale; Randon 1, Allen Dome, rigging up. Dansciger Oil Co.'s Bartlett 1, 3 mi w West Columbia, lcn. Gulf's Perry 3, Stratton Ridge, r 1167 ft.

FORT BEND COUNTY—Gulf's Trone 4, Long Point, abn; Trone 5, dr 836 ft shale and lime. Sun's Kasparek 1, dr 1365 ft shale. Farmer 3, Boling, plugged back, r. u. Gulf's Beard 1-A, Long Point, r 3694 ft.

HARRIS COUNTY—Dr. P. S. Griffith's Fee 2, 12 mi n Houston, sd 3517 ft. Juanita Oil Co.'s Kitman 1, 3 mi n Cypress, sd 1175 ft. Humble-Marland's Warren 2, Hockley, r. u.

JEFFERSON COUNTY—Beaumont Oil & Prospecting Co.'s Tyrell 1, 3 miles nw of Beaumont, fsh 3230 ft. J. O. Davis & Kinnear's Gladys 1, Spindle Top, fsh for drill pipe 5331 ft. So. Spindle Top O. & Dev. Co.'s Young 1, 1 mi w Nederland, bailed salt water 1616 ft. Jim McMurry's Crosby 1, 5 mi ne Port Arthur, dr 3180 ft shale.

LIBERTY COUNTY—Harrison Oil Co.'s Quintette 2, N. Dayton, dr 3947 ft. The Texas Co.'s Harvard 1, Davis Hill, r. u. Judge Titwell et al's Gardner 1, 5 mi e Davis Hill, sd 3508 ft. Barlow et al's Minchcliff 1, 2 mi ne Cleveland, dr 2184 ft gbo and shale.

MATAGORDA COUNTY — Matagorda County Dev. Co.'s Hawkins 1, Bay City, sd 1895 ft shale.

MONTGOMERY COUNTY—Brain et al's Fitch A-1, 3 mi e Spring, dr 2790 ft, shale and bldrs. Cordell & Lynn, Nichols 1, w of Pinehurst, dr 1175 ft, gbo.

WHARTON COUNTY—Ingram Prospecting Co.'s Mensing 1, Boling, sd 831 ft. C. L. Nail et al's Croom 1, 1 mi e of Wharton, lcn; 2500 ft se and 1000 ft sw from n corner of W. J. Croom 207 acre tract in Randall jones sur.

WEST TEXAS

Completion

Company, Well and Location	Initial Production Bbls.	Depth
CROCKETT COUNTY—		
W. W. Donnelly-Young et al, Pierce 1	*	3240

ANDREWS COUNTY—Amon Carter-Zweifel et al's Cowden 1, elev 3136 ft, top salt 1575 ft, dr 4378 ft. J. S. Cosden et al's Bedford-Ratliff 1, dr 1215 ft. Geo. Calvin & Belt's Bedford-Ratliff 1, set 15½ cas 650 ft. Deep Rock Oil Co. et al's W. J. Harris 1, elev 3173 ft, dr by bailer 1135 ft. C. B. McKennon et al's J. S. Means 1, sd 1030 ft.

BORDEN COUNTY—Marland's McDavid 1, lcn.

BREWSTER COUNTY—Van McPhail et al's McIntyre 1, sd 1020 ft. Mid-Kansas' W. W. Turney 1, dr 415 ft. Wilcox-Anderson et al's Gage 1, sd 1000 ft. Reece & White et al's Kimball 1, spudding. Cady & Keller's Decies 1, materials on ground.

COKE COUNTY—W. H. Brown et al's Foster 1, set 8¼ cas 2210 ft, dr 2235 ft. Danciger O. & R. Co.'s Byrn 1, dr 2610 ft. Lipan Oil Co.'s Conner 1, sd 1215 ft; Rawlings 1, sd 2736 ft.

CONCHO COUNTY—The Exploration Co.'s Hartgrove 1-A, dr 205 ft.

CRANE COUNTY—Crane County Dev. Co.'s Hartgrove 1, lcn. C. C. Duffey & Gault Brown's Cowden 1, rig. Gulf's Waddell 1, co 3500 ft. Marland's Cardova 1, elev 2298 ft, top salt 825 ft, dr 2025 ft. The Texas Co. et al's Cordova 1, lcn.

CROCKETT COUNTY—Geo. H. Anderson & Marland's University 1, elev 2666 ft, top

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Puts off the shot Under all conditions

Being *electrically operated, timed by a sturdy and accurate watch,* and *enclosed in a cast iron shell* tested to 2500 pounds hydraulic pressure, the Zero Hour Electric Bomb functions under any conditions of heat, pressure, or magnetic influence. Since it is set to explode at a predetermined time and then placed on top of the shot BEFORE casing is lifted or well is cleaned, Zero Hour puts off the shot successfully in extremely cavey holes.

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salt 1185 ft, top lime 2142 ft, sd 2632 ft. Blackwell O. & G. Co.'s Powell 2, elev 2747 ft, top salt 1055 ft, top lime 2505 ft, fsh cas 2627 ft. J. S. Cosden et al's Paul Perener 1, rig. Corbett & Gill's University 1, run 8¼ cas 1050 ft. W. W. Donnelly-Young et al's Pierce 1, elev 2105 ft, sd 3240 ft; Massie 1, spd and sd; Shannon 1, dr 975 ft. Epenauer et al's Noelke 1, sd 620 ft. Gulf's Powell 2-D, top salt 1060 ft, top lime 2490 ft, dr 2550 ft; Thompson 2, dr 335 ft. Geo. A. Henshaw & Marland's Noelke-Murphy 1, elev 2334 ft, top lime 1425 ft, dr lme 1600 ft, sulphur water in hole 1575-85 ft. James Kelly et al's Todd 1, run 10-inch cas 1050 ft. C. A. Jones et al's Powell 1, fsh 661 ft. McMannon Oil Co.'s Blakeney 1, dr 1915 ft. Newman Oil Co.'s Clark 1, moving in materials. Osage Oil Co.'s Halff 1, lcn. Wm. Shaffer et al's University 2, elev 2666 ft, top salt 1060 ft, sd 2344 ft. World Oil Co.'s Schneeman 1-B, sd 400 ft; Powell 1, lcn.

CULBERSON COUNTY—Jas. H. Gardner et al's Radford 1, sd 585 ft.

JEFF DAVIS COUNTY—J. K. Hughes Dev. Co.'s Means 2, ur cas 1250 ft. Humble's C. Flores 1-A, dr 1315 ft.

DAWSON COUNTY—R. R. Penn et al's Wright 1, elev 2854 ft, top lime 2594 ft, dr 4075 ft, with show of oil in lime.

ECTOR COUNTY—J. S. Cosden & The Texas Co.'s Connell 2-A, sd 3515 ft; Connell 3-A, sd 3545 ft; Connell 4-A, lcn.

FISHER COUNTY—Hucony Oil Co. et al's Langford 1, sd 3576 ft. Marland-Texon's J. S. McCall 1, rig. Marland & Miley Oil Co.'s Ammons 1, dr 3685 ft. Cranfill & Reynolds J. A. Young 1, lcn. Sinclair's Farmer-Denise 1, ur cas to test show, 3077-80 ft. The Texas Co.'s Stephens 1, sd 2303 ft.

GAINES COUNTY—Westheimer & Daube's Forbes 1, dr 4180 ft.

GLASSCOCK COUNTY— The California Co.'s W. B. Currie 2, dk. Magnolia's Roberts 1, dr 2325 ft. World Oil Co. et al's McDowell 1, elev 2545 ft, top salt 1180 ft, dr 3665 ft.

TOM GREEN COUNTY—J. V. Cox et al's Llano County Fee 1, sd 306 ft. Fitzgerald & Taliaferro's Bennett 1, running 8¼ inch cas 1385 ft.

HOCKLEY COUNTY—World Oil Co.'s Ellwood 1, dr 795 ft.

HOWARD COUNTY—The Calif. Co.'s Fisher 1, dr 2035 ft. W. W. Donnelly & Mann-Freel's Martin 1, elev 2552 ft, top salt 960 ft, dr 2975 ft. F-H-E Oil Co. et al's Roberts 1-B, making 2 mil ft of gas, sd 1915 ft. Geo. A. Henshaw Jr. & Co.'s Eason 1, sd 1925 ft. W. R. Settles 1, ur 10-inch cas 1465 ft, hole full of sulphur water. L. C. Harrison et al's Roberts 3, dr 1475 ft. Magnolia's Mary-Chalk 6, dr 1695 ft, had showing good for 80 barrels daily; Kelly-Chalk 2, dr 1425 ft; Kelly-Chalk 7, dr 1235 ft; Kelly-Chalk 8, ur 8¼ cas 818 ft; Sarah-Hyman 3, dr 550 ft; John Roberts 1, dr 1905 ft, show oil. Marland's Clay 1-E, dr 2535 ft, gray lime, 1900 ft oil in hole; Jones 1, sd 500 ft; A. M. Fisher 1, elev 2740 ft, top lime 2950 ft, ur 3505 ft; A. G. Haynes 1, top salt 1155 ft, top lime 2860 ft, dr 3260 ft; A. Richardson 1, rig. Marland & Texon's Connelly 1, elev 2577 ft, set 8¼ cas 1050 ft, dr 1185 ft; Guitar 1-A, elev 2556 ft, top salt 1215 ft, dr 2755 ft; Settles 1-A, dr 290 ft. Mays-Nixon & Flowers' Flowers 1, rig. Peer Oil Corp.'s C. D. Read 1, dr 800 ft. Sweeney et al's Chalk 2, dr 1565 ft. Vitex Oil Co.'s Clay 1, sd 1450 ft.

HUDSPETH COUNTY—Lockhart & Co.'s Moore 1, sd 100 ft; Gardner & Mosley 1, rig.

JONES COUNTY—E. P. Campbell et al's Herndon 1, sd 3009 ft. R. F. Garland & Co.'s Glynn 1, dr 2238 ft. Gibson-Johnson et al's Joe Dillard 1, fighting cave 2130 ft. Hutson & Weaver's Smith 1-A, run 10-inch cas 800 ft. Phillips' Mason 2, spudding. Stebbins O. & G. Co.-Sinclair's Scott 1, dr 200 ft. W. G. Stough et al's Willis 1, fsh 1740 ft. Swensondale Oil Co.'s Canton 1, sd 2505 ft.

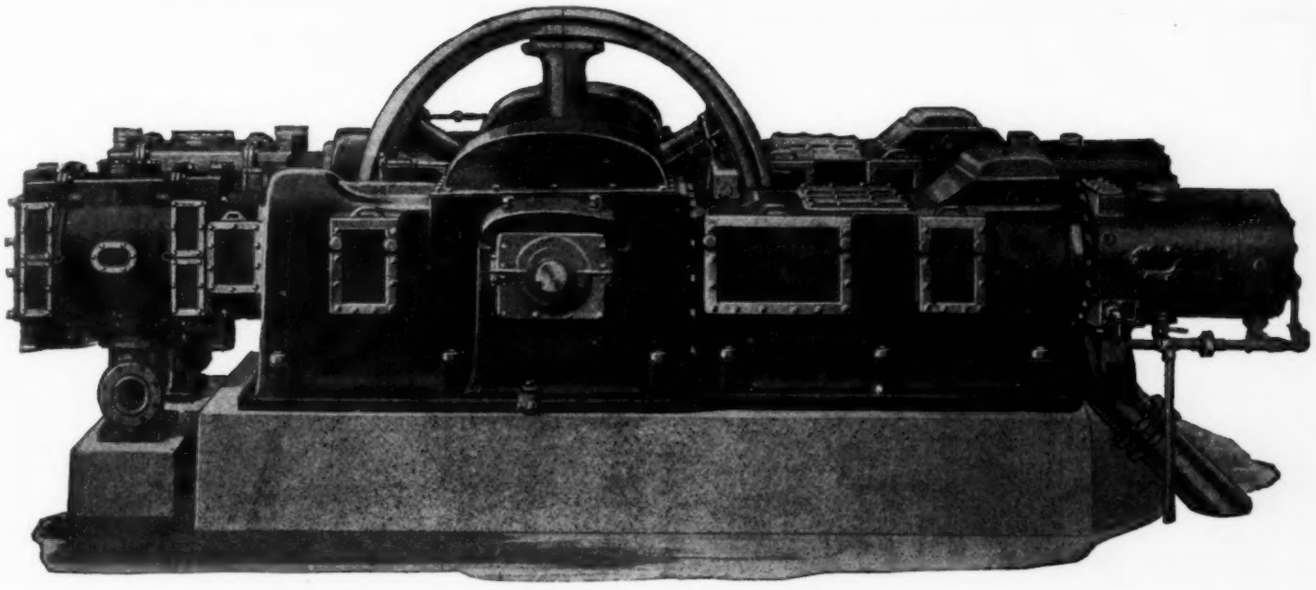
KENT COUNTY—Marland-Texon's N. V. Bibly 1, lcn.

KING COUNTY—Humble's Pitchfork 1, dr 1210 ft. Mid-West Exploration Co.'s Patton 1, elev 1706 ft, dr 3125 ft. Pattison et al's Patton 1, elev 1616 ft, sd 2670 ft. White Eagle O. & R. Co.'s Burnett 1, elev 1818 ft, sd 3440 ft.

LYNN COUNTY—Elpo Oil Co.'s Nevels 1, dr 525 ft. Hart Oil Corp.'s Edwards 1-A, spd.

MITCHELL COUNTY—Thraves Oil Corp.'s C. Way 1, elev 2126 ft, top lime 2140 ft, fsh 2509 ft.

NOLAN COUNTY—John Winemiller Corp.'s



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For reducing inlet pressures of 200 to 400 pounds to any desired outlet pressure from 5 to 10 lbs., 10 to 25 lbs., or 25 to 75 lbs.; or reducing inlet pressures ranging up to 100 lbs., to any outlet pressure from 8-oz. to 1 lb., 1 to 2 lbs., or 2 to 5 lbs. Standard regulators suitable for inlet pressures up to 200 lbs.; extra heavy type for inlet pressures up to 400 lbs. (Not suitable for dead-end service.)

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Booth 1, elev 2341 ft, sd 3213 ft, preparing to shoot. Henry Zweifel et al's Longbotham-Neal 1, elev 2528 ft, sd 3575 ft.

PECOS COUNTY—Anderson et al's McKenzie 1, elev 2928 ft, top salt 1010 ft, dr 2210 ft; Sherbino 1, materials. Buell-Hagen et al's Batchelor 1, elev 3136 ft, sd 2820 ft; Jasper 1, elev 3307 ft, top salt 1527 ft, sd 2902 ft. Crude Oil Co.'s River Bed 3, dr 120 ft. The California Co.'s Smith 1, cem 6-inch cas 1250 ft, sd for storage 1331 ft, flowed 500 bbls per hour; Smith 2, dr 1100 ft; Smith 3, rig; Yates 2, rig; Yates 3, show oil, r 1130 ft; Yates 4, dr 991 ft; Yates 5, dr 910 ft. Day Bros. & McKnight's Yates 1, spudded. T. R. Cowell's J. C. Trees 1, elev 2545 ft, top salt 2305 ft, sd 3460 ft. M. Z. Dibble et al's Bonebrake 1, sd 640 ft. Douglas Oil Co.'s Sellman 1, sd 738 ft. Bob Elmore et al's Manly Holmes 1, elev 2176 ft, top salt 335 ft, sd 2011 ft, show of oil and also sulphur water. R. F. Garland & Co.'s El Paso Fee 1, elev 3264 ft, top lime 1950 ft, dr 3015 ft, showing sulphur water. Geo. A. Henshaw & Co.'s Corder 1, lcn. Humble's Smith 1, flowing 87 bbls per hour, pinched, 1425-1600 ft; Smith 2, 3 and 1-B, rig. Kirby Pet. & Roxana's W. W. Turney 1, dr 578 ft. Marland's Yates 2-A and 3-A, machines; Yates 4-A, lcn. Marland & McMan's Yates 2, flowing 11 bbls hourly, 1112-75 ft, cemented 6⅝ cas 1204 ft; Yates 3, flowing 93 bbls hourly, 1235-1358 ft; Yates 4, flowing 70 bbls hourly 1290-1355 ft; Yates 5, dr 1480 ft; Yates 6, cem 1420 ft; Yates 7, rig; Yates 8 and 9, lcns. Mazda Oil Corp. & Savoy Oil Co.'s Smith 1, elev 2705 ft, top salt 800 ft, sd 1470 ft; Smith 2, lcn. Mid-Kansas & Transcontinental's Smith 1, cem 6-inch 1000 ft; Smith-Taylor 2, cem 6-inch 1153 ft, flowing 95 bbls per hour 1255-1375 ft; Smith-Taylor 3, lcn; Yates 8-A, straightening crooked hole, 435 ft; Yates 9-A, machine; Yates 4-B, dr 145 ft; 5-B, 6-B, 7-B, 8-B and 9-B, machines; Yates 2-C, 3-C, machines; Yates 1-D, dr 435 ft. Moody Oil Corp.'s Corder 1, lcn. Olean Pet. Co.'s G. A. Harral 1, elev 3005 ft, top salt 1135 ft, dr 1455 ft. Red Bank Oil Co.'s Smith 2, rig. Roxana's Smith 1-A, dr 1550 ft, flowing 100 bbls six hours; Tippett 1, flowing 80 bbls hourly 1332-85 ft. W. R. Shankel et al's Yates 1, sd 1479 ft. Simms Oil Co.'s Smith 2, rig, elev 3539 ft, est 25 bbls oil 1510-32 ft. World Oil Co.'s Kloh 1, materials.

PRESIDIO COUNTY — Hadlock-Miller et al's Tootle 1, dr 2960 ft. Pinto Canyon Oil Co.'s Fields 1, lcn.

REAGAN COUNTY—Camp & Henshaw Jr. & Co.'s University 1, spd and sd.

REEVES COUNTY—D. R. Thompson et al's Eddins 1, sd 1322 ft. World Oil Co.'s Duff 1-A, elev 2753 ft, top salt 1940 ft, top Delaware 4185 ft, sd 4189 ft.

RUNNELS COUNTY—Kennedy et al's J. E. Talley 1, rig. Noble O. & G. Co.'s Simms 1, ur 2300 ft. Miles Oil Co.'s L. S. Lawhon 1, fsh 1362 ft, show gas 960-48 ft. Swensondale Oil Co.'s E. A. Werner 1, spd and sd. Owenwood Oil Corp.'s H. B. Fowler 1, lcn.

SCHLEICHER COUNTY—Thos. Gray-Lehman et al's Robinson 1, sd 3004 ft.

STONEWALL COUNTY—Peer Oil Corp. & Producers Oil Co.'s R. P. Morrow 1, sd for 8¼ cas 2500 ft.

TAYLOR COUNTY—A. J. Brown Production Co.'s Henslee 1-A, elev 2010 ft, ur 8¼ cas 2237 ft. Sloan et al's Latimer 1, fsh 2610 ft. Roeser-Pendleton Inc.'s Sam Butman 1, sd 2570 ft.

TERRELL COUNTY—W. W. Donnelly & Bend Oil Co.'s Bassett 1, lcn.

UPTON COUNTY—J. M. Hickey et al's Gormley 1, elev 2358 ft, top salt 472 ft, sd 2115 ft. Curtis & Hults et al's Giddings 2, sd 300 ft. Wise & Jackson's Porter 1, sd 3517 ft.

VAL VERDE COUNTY—Douglas Oil Co.'s Sellars 1, dr 3195 ft. Magnolia's Whitehead 1, dr 4340 ft. O. O. Owens et al's Henry Mills 1, sd 2680 ft.

WINKLER COUNTY—Amerada's J. B. Walton, spd. Atlantic's Grisham-Hunter 1, sd storage 2522 ft; Grisham-Hunter 2, rigging up; Ida Hendricks 1, dr 1550 ft; Lemar 1, dr 205 ft. Arizona Mining & Engineering Co.'s Hendricks 1, spd and sd. The California Co. & Cranfill Bros. Oil Co.'s M. J. Bashara 1, elev 2983 ft, top salt 1100 ft, dr 2765 ft. George M. Church et al's Ida Hendricks 1, rotary rig. Cranfill-Reynolds et al's Ida Hendricks 1, top salt 1290 ft, top lime 2478 ft, showed 3 mil cu ft gas, dr 2680 ft; Hendricks 2, top salt 1271 ft, dr

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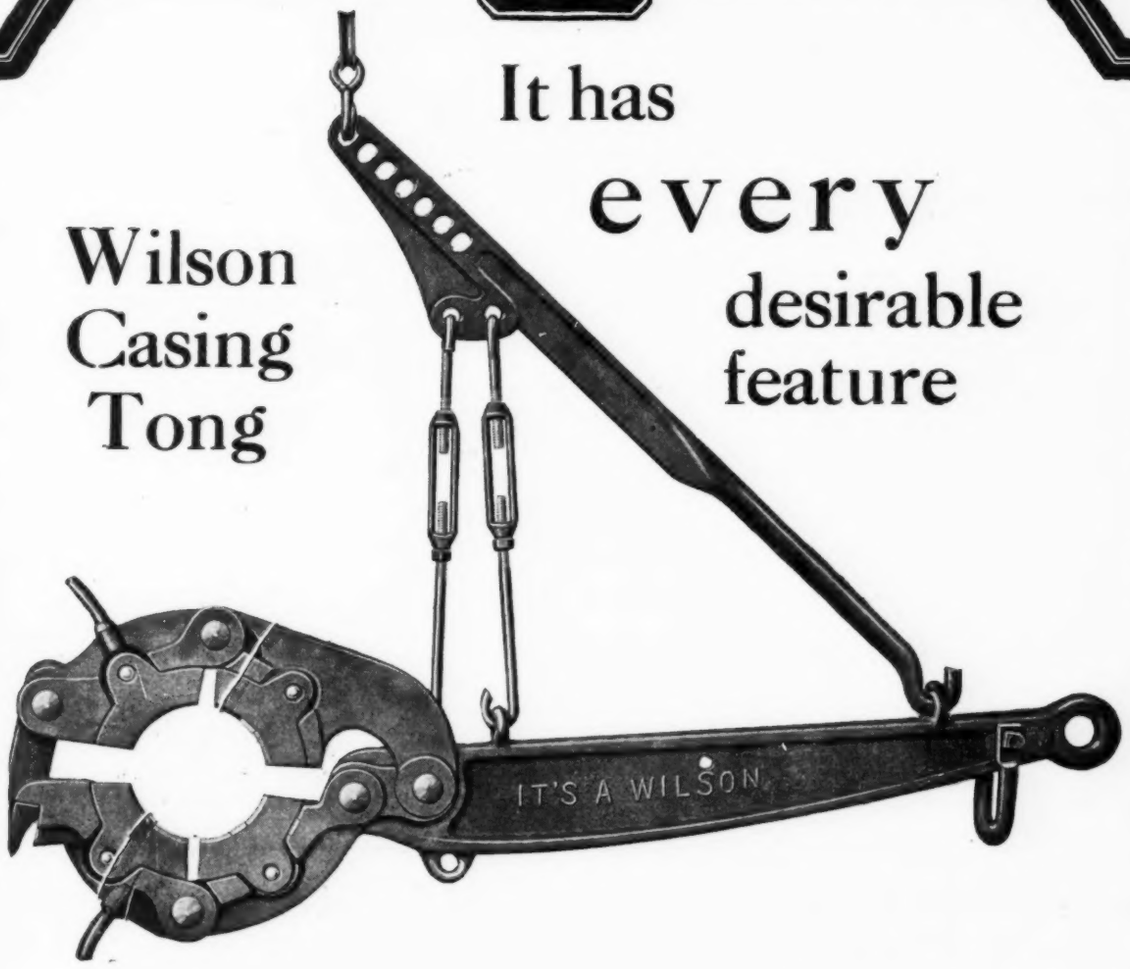
Wilson Casing Tong

It has every desirable feature



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2-STEP SPRING LATCH

The same Tong fits casing and coupling—or two diameters, without adjustment. The spring-latch is POSITIVE.

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Spring dowel pins permit attaching of Bushings instantly so that different sizes of casing can be tonged with the same Tong. No bolts.

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1280 ft; Grisham-Hunter 1-A, lcn. Gulf's Hendricks 2, rig; Hendricks 3, sd storage 2597 ft; Hendricks 4, sd storage 2658 ft; Hendricks 5, sd storage 2505 ft; Hendricks 6, sd storage 2556 ft; Hendricks 7, sd storage 2520 ft. Ed. S. Hill-Ladd & Tidal's Ambrugey 1, showing sulphur water, dr 4476 ft. Humble's Grisham-Hunter 1, top salt 1480 ft, ur cas 2763 ft, td; Grisham-Hunter 2, elev 2824 ft, top salt 1340 ft, top lime 2230 ft, making 20 mil ft gas 2390 ft; Grisham-Hunter 3, top salt 1362 ft, dr 1380 ft; Grisham-Hunter 4, dr 810 ft; Grisham-Hunter 5, dk; Hendricks 1, (sec 36) top salt 2120 ft, top lime 3100 ft, dr 3170 ft. Independent's Grisham-Hunter 1, sd storage 2601 ft; Grisham-Hunter 2, sd storage 2504 ft; Hendricks 1-B, (Sec 44) cavey hole, cementing crevice, 615 ft. Landreth & Roxana's Grisham-Hunter 1, elev 2838 ft, top salt 1884 ft, sd storage 2860 ft; Grisham-Hunter 2, top salt 1830 ft, top lime 2496 ft, cem 6⅝ cas 2506 ft; Ida Hendricks 1-A, elev 2791 ft, top salt 1395 ft, standardizing 2660 ft; Ida Hendricks 2-A, dk; 3-A, dk. Liner Drilling Co. et al's Campbell 1, dr 315 ft. Llano Oil Co. & Roxana's Scarborough 1, elev 2943 ft, top salt 1115 ft, swab 70 bbls oil after shot 180 qts, td 3447 ft. R. S. Matthews et al's Cowden 1-A, sd 3501 ft; Marland's Hendricks 1, lcn; Hendricks 2, top salt 1297 ft, dr 2395 ft; Hendricks 3, top salt, 1225 ft, cem cas 2427 ft; Hendricks 4, rig. Joe Maxwell & L. C. Turman's Hendricks 1, dr 900 ft; Hendricks 2, rig. Murchison-Cranfill & Marland's Grisham-Hunter 2, lcn; Grisham-Hunter 3, top salt 1260 ft, dr 2298 ft; Grisham-Hunter 4, lcn. Murchison-Cranfill et al's Grisham-Hunter 1-B, top lime 2309 ft, cem 8¼ cas 2320 ft, wtg on cem. Pure Oil Co.'s Grisham-Hunter 2, sd storage 2680 ft; Grisham-Hunter 3, rig; Grisham-Hunter 1-B, (sec 34) elev 2827 ft, top salt 1395 ft, top lime 2276 ft, show of oil and gas, 2405 ft, fsh; Grisham-Hunter 2-B, elev 2817 ft, top salt 1295 ft, top lime 2387 ft, standardizing 2387 ft; Grisham-Hunter 3-B, rig; Grisham-Hunter 4-B, lcn. Republic Prod. Co.'s Grisham-Hunter 1-A (sec 45) dr 2130 ft; Grisham-Hunter 1-B, (esc 41) elev 2823 ft, top salt 1300 ft, top lime 2125 ft, dr 2170 ft, trying to kill gas; Grisham-Hunter 2-B, moving in materials. Roxana's Grisham-Hunter 1-A (sec 45) top lime 2428 ft, cemented 8¼ cas 2427 ft; Ida Hendricks 1-B (sec 29) elev 2796 ft, top salt 1330 ft, dr 2635 ft; 2-B (sec 29) materials; Hendricks 1-C, dr 430 ft; Hendricks 1-D, dk. Southern Crude Oil Purchasing Co.'s Grisham-Hunter 1, 3-T-68-A, standardizing 2313 ft; Grisham-Hunter 2, 3-T-68-A, dr 915 ft; Grisham-Hunter 1, T-89-A, dr 2544 ft, 10 mil ft gas 2473 to 2475 ft; Ida Hendricks 1, 3-T-67-A, dr 2818 ft; Ida Hendricks 2, 3-T-67-A, dr 1001 ft, hole filled up, recemented 10-inch at 340 ft, now dr at 442 ft; Ida Hendricks 1, T-67-13, standardizing 2648 ft; Ida Hendricks 2, T-88-B, dk; Ida Hendricks 3, T-67-C, sd for storage 2740 ft; Ida Hendricks 4, T-67-C, sd for storage 2740 ft; Ida Hendricks 1, T-88-C, standardizing 2429 ft; Ida Hendricks 2, T-88-C, dr 1005 ft; Ida Hendricks 1, T-67-F, sd 2529 ft. Texon Oil & Land Co.'s Grisham-Hunter 1-A, selling gas 2814 ft; Grisham-Hunter, 2-A, top salt 1390 ft, dr 1551 ft; Grisham-Hunter 1-B, (sec 45) dr 515 ft; Grisham-Hunter 2-B, spudded. White Eagle O. & R. Co.'s Leck-Collins 1, pulling 6⅝-inch cas 2445 ft.

SOUTHWEST TEXAS
Completions

Company, Well and Location	Initial Production Bbls.	Depth
STARR COUNTY—		
Deckle & McCarley, Garcia 1.....	*	1098
WEBB COUNTY—		
Trussell et al, Bruni 1	¶10	2352

BROOKS COUNTY—The Texas Co.'s Lasater 3, Cypress Hill, dr 4150 ft, hard sand, oil odor.

CALDWELL COUNTY—Sutton & Smith's Carter 1, 4 miles ne Luling, td 2636 ft; Carter 2, lcn. Radcliff et al's New 1, 7 miles ne Luling, pulling liner, td 2959 ft.

DUVAL COUNTY—Brehm Woodward et al's Dinn 1, lcn. Schlissinger et al's Moody 2, lcn.

HIDALGO COUNTY—Queen City O. & G. Co.'s American Land & Drilling & Irrig Co. 1, n Mercedes, fsh 2120 ft. Dale Smith's Daskan 1, sd 2107 ft.

JIM HOGG COUNTY—Paesana Synd.'s Campbell 1, 8 miles se Hebbronville, dr 1502 ft, shale; Las Vivoricitas Grant 1, dr 1465 ft. Hale et al's Jones 1, td 2548 ft. Smi-Look Oil Co.'s Matrinez 1, sd 500 ft. O. W. Killam's Canales 1, 16 miles se of Hebbronville, dr 640 ft, shale.

MAVERICK COUNTY—Rycade's Sullivan 1, fsh 5132 ft; Chittam 1, sdtrk 4100 ft; td 5630 ft; Chittim 2, dr 796 ft. Ryan Consolidated's India Land Co. 1, 24 miles se Eagle Pass, td 2400 ft. Johnson et al's Wipff 1, sd 1365 ft.

SAN PATRICIO COUNTY — Connors Walsh's Oben 1, White Point, 2800 ft, water sand. Mission Drilling Co.'s Harwood 1, White Point, dr 1875 ft, shale; Hunter 1, lcn. National Oil Co.'s Jno. McMullen sur 197 acre tr, sd 1135 ft, gumbo. J. E. Garrett's Fee 1, 1 mile e Gregory, dr 2100 ft, gumbo. Houston Oil Co.'s Humble 1, White Point, set 10-inch at 417 ft; Humble 2, White Point, dk.

STARR COUNTY—Deckle & McCarley's Garcia 1, abn. T. G. Folz's Salinas 1, sd.

VAL VERDE COUNTY—East Del Rio's Weatherbee 1, sd 3190 ft. Owens et al's Mills 1, sd 2801 ft, black shale. Magnolia's Whitehead 1, dr 4320 ft, shale.

WEBB COUNTY—Newton Drilling Co.'s Bruni 1. Trussel et al's Bruni 1, td 2352 ft, completed; gas, rp 650 lbs, est 10 mil ft dry gas.

Loop Ozark Line

Tulsa.—Ozark Pipe Line Company, transportation unit of Roxana Petroleum Corporation, both subsidiaries of the Dutch Shell, has started construction of several loops on its 10-inch line from Cushing, Oklahoma, to Alton, Illinois. Construction camps have already been established at Yale, Oklahoma, and Ottawa, Kansas.

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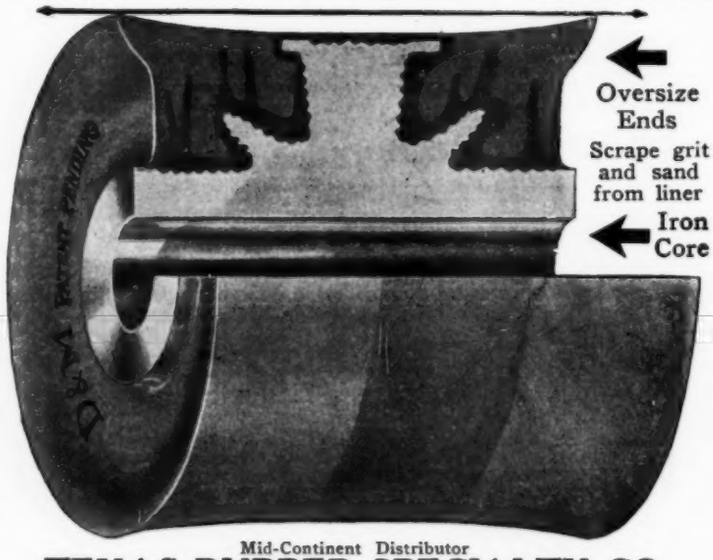

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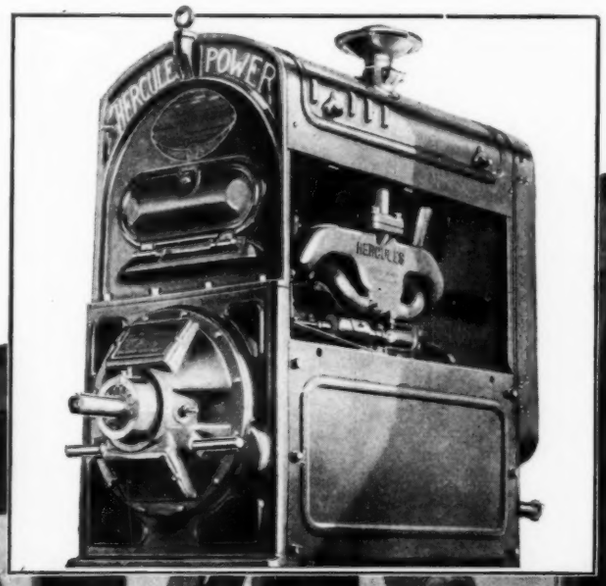

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Geophysics Locates Two New Louisiana Domes

Houston.—The Louisiana Land & Exploration Company has discovered two new domes in Southern Louisiana through geophysical methods, and one new location has been made on each dome for immediate drilling.

One of these new domes is in the south part of Calcasieu lake; the test which will be drilled on it will be located at a point 8803 feet west and 3182 feet north of the northeast corner of Section 1, Township 14 south, Range 9 west. This test will be known as the Calcasieu Lake 2, State of Louisiana lease. It will be on piling foundation, and will be drilled with a gasoline rig.

The other newly discovered dome is located in Vermilion Bay, and the Louisiana Land & Exploration Company's Vermilion Bay 2 will test the structure at a point about three and one-quarter miles southwest of Cypremont Point and about the same distance from the Vermilion Bay 1, which was recently abandoned. This location also calls for a foundation of piling, but the test will be drilled with the steam rig previously used on the No. 1 test.

The Louisiana Land & Exploration Company is engaged in shooting with seismograph about two million acres of State leases and fee holdings, and the two new supposed domes referred to above are the results of this work during the past six weeks.

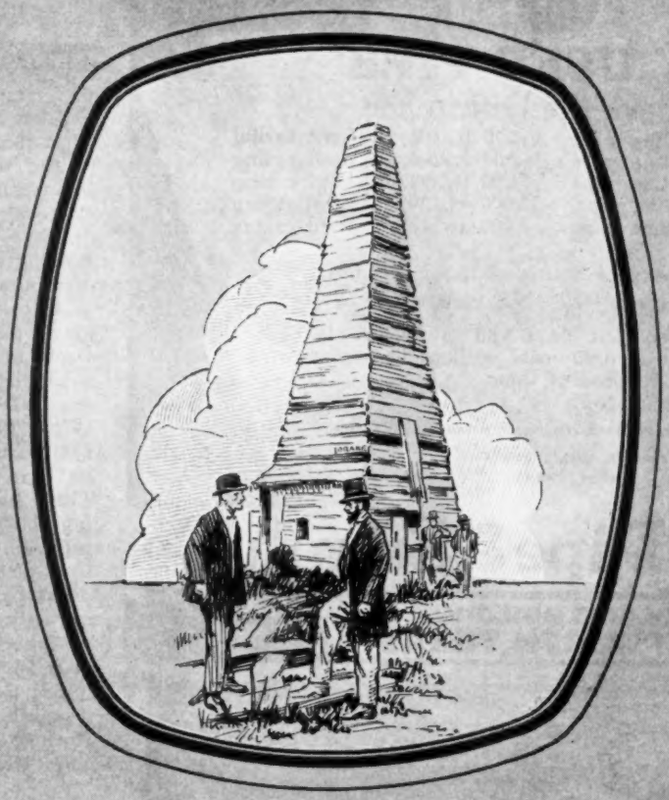
This company has recently changed its headquarters location from the Chronicle Building to the 17th floor of the Esperson Building, Houston.

Deepen Old Producers in Eastern Grant County

Tulsa.—A campaign of deepening old wells in the Deer Creek field of Eastern Grant County is resulting from the recent striking of oil pay below the old gas producing horizon. Western States Land & Oil Company opened gas pay five years ago at around 3900 feet. Kay Oil Company's Elswick 1, located in the southwest of the southeast of section 14-37-3w, recently made 75 barrels of high gravity oil and 4,000,000 feet of gas when deepened to 4050-71 feet. More than a dozen gas wells have started deepening since this discovery, and the Argo Oil Company, subsidiary of the Western States Land & Oil Company now plans to start deepening some old wells and also to start several new locations for drilling to the 4050 foot sand.

Deepen Gas Well

Tulsa.—The Burke Greis Oil Company is deepening its 18,000,000 foot gasser, Deer 2, in the southwest of the northwest of the southwest of section 36-11-9, Okfuskee County, which recently started producing from the Gilcrease sand at 2915 feet.



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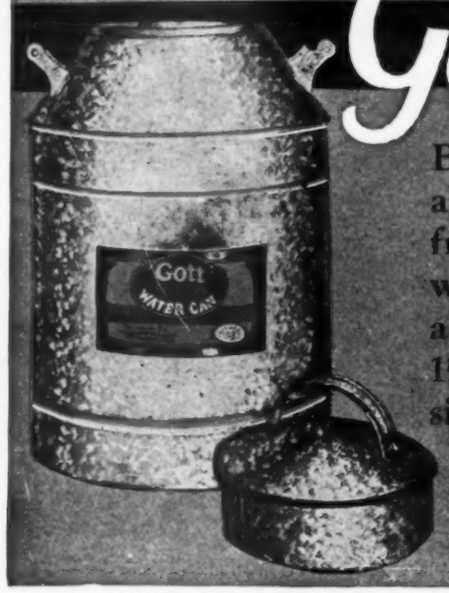

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Summary of Existing Information on Handling Congealing Oils and Paraffins

(Contiuued from page 48)

the surest methods of preventing this trouble, and is widely used.

When there is an oil and gas separator at the well, steam coils can be used in the separator to heat the oil, but this method is likely to cause excessive evaporation of the oil and a loss in gravity. The oil can also be heated by running through a steam heater or heat exchanger, usually consisting of a small pipe inside a larger one, the oil running through the smaller pipe and the steam in the outside or larger pine. In some fields, gas heaters, and in some few instances, electric heaters, are used. When the flow line is used, several heaters may be necessary to keep the oil heated above the congealing point. These heaters are satisfactory, providing the oil is kept moving; but when the well does not produce continuously they often fail. When the flow of the oil stops, the portion between the heaters will cool off and congeal, if the atmospheric temperature is low enough. It is advisable, therefore, where the oil is not moving continuously, to provide a method of heating the flow line throughout its entire length or to bury it.

Paraffin Troubles in Pipe Lines

Paraffin is seldom deposited as a hard layer in pipe lines, but the oil will congeal. This trouble can be partly or entirely prevented by burying the line, but in handling oils that congeal at a comparatively high temperature, it is necessary to heat the oil at various points along the line. If the oils are heated to a temperature above the melting point of the waxes that they contain, the point at which they congeal will be considerably lowered, and they will not return to their original pour point for a number of hours; in some instances, not for days. The fact that the pour point can be lowered in this manner makes it possible to handle some oils that could not otherwise be run through the lines during the winter months except by using a great number of heaters or by burying the lines eight or ten feet, the expense of which would be prohibitive.

Occasionally paraffin does settle out of the oil and accumulate in the bottom of the lines as a soft, granular mass; but it does not become firmly attached to the pipe, and the quantity is seldom sufficient to cause trouble. Silt, sand, etc., also accumulate, and it is advisable to run scrapers through the lines at regular intervals to prevent the building up of large quantities of refuse.

Paraffin Troubles in Storage

When oils containing a large amount of wax are placed in storage, the wax slowly settles out of the oil and accumulates as a thick, granular mass in the bottom of the tank. This also oc-

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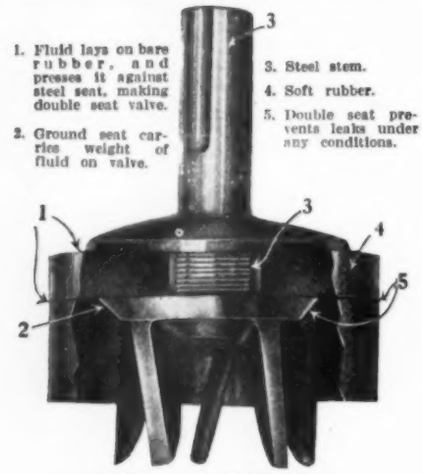
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curs sometimes while oil is being shipped in tank cars. Usually it is mistaken for emulsion, especially where some emulsion is also present. This accumulation of wax is caused by the fact that the average daily temperature of the oil is below the point at which it is saturated with wax, and the excess crystallizes out of solution and settles to the bottom of the tank.

After oil has stood in storage for a long period of time and the excess wax has been allowed to settle out, the pour point is considerably lower than it was with the fresh oil. If this paraffin is not put back into solution it represents a loss as tank bottoms, because few, if any, pipe lines will accept it, even if it does not contain any water, as it would settle out in the lines and cause considerable trouble. It is advisable, therefore, to put it back into solution in the oil, either before or while running the oil from storage. This can be done by removing the tank bottoms from the tank and heating them to a temperature sufficient to cause all the wax to melt and go into solution in the oil associated with it, and then mixing this heated wax with the oil from which it separated. If there is also considerable emulsion, the water must be removed before the oil is returned to the larger body of oil. This can usually be accomplished by heating the bottoms, consisting of oil, wax and emulsion, and adding a chemical. Upon running this heated oil into the bottom of a tank partly filled with hot, fresh water, the emulsion will break down, and clean oil can be taken from the top of the tank. Care should be taken not to add too great an amount of the treated oil to the original or to fresh oil, as this may cause the wax to settle out again very rapidly. It is advisable to use vapor-tight heaters and tanks while treating these tank bottoms, to prevent evaporation losses.

Summary

In this paper, the writer has tried to discuss the most important problems encountered in producing oils of high paraffin content, and also the most satisfactory methods of preventing and handling these conditions. It is impossible in so short a paper to discuss in detail all the various problems and different methods that have been tried or used to overcome paraffin deposits.

Tulsa.—H. F. Wilcox Oil & Gas Company's Dixon 3 in the Hall-Donnelly pool of Creek County has encountered a new sand reported as lying 50 feet above the Wilcox sand, and last week had 2500 feet of oil in the hole from pay at 3368 feet. Dixon 3 is located in the northeast of the northwest of the southwest of section 18-14-10, and is a south offset to the Independent's discovery well in this pool, which is now producing more than 500 barrels daily.

Prairie's Harjo 3, in the northwest of the northeast of the southeast of section 18, topped the Wilcox at 3390 feet and is showing oil after deepening to 3407 feet.

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Texas Panhandle - Oklahoma Gas Line Deferred

Tulsa, Okla.—Construction work on the Oklahoma Natural Gas Corporation's proposed 22-inch line from the Texas Panhandle gas area to Oklahoma, where a connection will be made with the system now serving about 50 of the principal towns in central and southern part of Oklahoma, will not be started until next spring. About 240 miles of pipe will be required to connect up the Oklahoma system with the Panhandle gas fields.

The controlling interest in the Oklahoma Natural Gas Corporation was purchased by Phillips Petroleum Company last May, and the latter company will supply the bulk of the gas to be taken from the Texas Panhandle. Oklahoma Natural Gas Corporation is completing a 35-mile 16-inch line from the lower end of the Chickasha gas field to the Canadian River to supplement the system now delivering gas into Oklahoma City and other nearby points. The State of Texas receives one-eighth royalty from the oil and gas produced.

Atlas Opens Store

Muskogee, Okla. — Atlas Supply Company announces the opening of a new branch at Peyote to afford better facilities in West Texas. The Peyote branch will be under the jurisdiction of George Bolinger, district manager in Fort Worth. Atlas Supply Company maintains stores at McCamey, Borger and Vernon, in Texas, and at Tulsa, Earlsboro, Ada and Wetumka, in Oklahoma. J. H. McDougald is president and J. R. Brooks general manager, both of Muskogee.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of The OIL WEEKLY published weekly at Houston, Texas, for October 1st, 1927.

State of Texas, County of Harris.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared A. L. Burns, who, having been duly sworn according to law, deposes and says that he is the General Manager of The OIL WEEKLY and that the following is, to the best of his knowledge and belief a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of— Postoffice address—

Publisher—R. L. Dudley, 1716 Dallas Ave., Houston, Texas.

Editor—S. W. Robinson, 1716 Dallas Ave., Houston, Texas.

Managing Editor—J. Kent Ridley, 1716 Dallas Ave., Houston, Texas.

Manager—A. L. Burns, 1716 Dallas Ave., Houston, Texas.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

James Anderson, Houston, Texas; R. L. Blaffer, Houston, Texas; Mrs. S. C. Blaffer, Houston, Texas; A. L. Burns, Houston, Texas; J. F. Carter, Jr., Tulsa, Okla; Dr. N. L. Dudley, Goose Creek, Texas; R. L. Dudley, Houston, Texas; W. S. Farish, Houston, Texas; Dr. J. L. Gross, Houston, Texas; H. R. Hughes, Houston, Texas; Charles H. Lane, Houston, Texas; J. H. McEvoy, Houston, Texas; J. H. McEvoy, Jr., Houston, Texas; Wallace E. Pratt, Houston, Texas; J. Kent Ridley, Houston, Texas; S. W. Robinson, Houston, Texas; C. N. Scott, Houston, Texas; R. S. Sterling, Houston, Texas; John R. Suman, Houston, Texas; O. R. Waller, Chicago, Ill.; C. F. Williams, Humble, Texas.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

A. L. BURNS,
General Manager.

Sworn to and subscribed before me this 3rd day of October, 1927.

J. KENT RIDLEY,
(Seal) Notary Public.

(My commission expires June 1st, 1929.)

Oil and Gas Leases
Marathon Fold — West Texas
5000 acres Val Verde County.
10,000 acres SW. Crockett County. 10 yr. paid up, adjoining big company tracts.
1500 acres along Pecos River.
1500 acres NE. Terrell County, paid up for 10 years.
Upton County scattered tracts.
Pecos County scattered tracts.
3000 acres eastern Irion County.
4000 acres Loving County.
Royalties in various West Texas Counties.
Prices and maps upon request. Time for examination allowed.
C. W. WEBSTER
Petroleum Bldg., Ft. Worth, Texas
Reference: Mercantile Agencies

GEORGE K. STAYTON
ATTORNEY AT LAW
Oil and Gas and Land Practice
Winkler Field, Pyote, Texas

PHILLIP MAVERICK
PETROLEUM GEOLOGIST
Telephone 93
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San Angelo, Texas

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